UNIVERSITY OF ALBERTA

Adolescent Sexuality in a Developmental Context: Identity and Egocentrism

by

Laurie Ann J. Schnirer

A thesis submitted to the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Department of Educational Psychology

Edmonton, Alberta,

Fall 2000

National Library of Canada
Acquisitions and Bibliographic Services
395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale du Canada
Acquisitions et services bibliographiques
395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-59666-4

Canada

UNIVERSITY OF ALBERTA

Library Release Form

Name of Author: Laurie Ann J. Schnirer

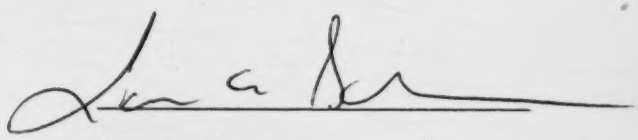
Title of Thesis: Adolescent Sexuality in a Developmental Context: Identity and Egocentrism

Degree: Doctor of Philosophy

Year this Degree Granted: 2000

Permission is hereby granted to the University of Alberta Library to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves all other publication and other rights in association with the copyright in the thesis, and except as herein before provided, neither the thesis nor any substantial portion thereof may be printed or otherwise reproduced in any material form whatever without the author's prior written permission.



10843 - 64 Avenue
Edmonton, Alberta
Canada, T6H 1T3

Date: Sept 27/00

Abstract

The problems of irresponsible adolescent sexual decision making, such as pregnancy and sexually transmitted diseases, are due in part to the developmental stage of adolescence itself. Adolescents lack experience, are struggling with self-definition and are challenged by cognitive changes including social cognition. In this study, 146 late adolescents completed measures of ego identity and egocentrism (specifically personal fable ideology) for the purpose of examining the relationship between identity development, egocentrism and sexual behaviours and attitudes. In addition to the developmental constructs, social factors and risk-taking variables were examined. This dissertation is organized into an introduction and review, three papers, and concluding discussion. It was reported in Paper 1 that adolescents in the Foreclosed ego identity stage had significantly lower sexual experience than those in either the Achieved or Diffused stages. In Paper 2, it was shown that ten percent of the variance in sexual activity among undergraduates can be attributed to Personal Fable constructs, specifically omnipotence and outside variables were the significant predictors. In Paper 3, it was reported that the best group of predictors for sexual risk-taking in order were Developmental variables (age, father's occupation, initial dating age), Sexual Attitudes, Interpersonal factors and Risk-Taking variables. From the findings, further study into the inter-relatedness of these developmental constructs across a more heterogeneous sample is warranted.

UNIVERSITY OF ALBERTA

Faculty of Graduate Studies and Research

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Adolescent Sexuality in a Developmental Context: Identity and Egocentrism** submitted by **Laurie Ann J. Schnirer** in partial fulfillment of the requirements for the degree of **Doctor of Philosophy**.

Gretchen C. Hess
Dr. Gretchen C. Hess

M. Ruth Elliott
Dr. M. Ruth Elliott

Mark J. Gierl
Dr. Mark J. Gierl

Robin D. Everall
Dr. Robin D. Everall

Leonard L. Stewin
Dr. Leonard L. Stewin

Dedication

For

Grandma (Lauranna) Bergevin

for teaching me about wisdom and strength

Acknowledgement

There are a number of people I would like to thank for their contribution to my life during graduate school and the completion of this dissertation.

I would like to thank my supervisor Dr. Gretchen Hess for her constant faith in me. I am tremendously proud that she is not only my teacher and mentor, but a colleague and friend. Other graduate students should be so lucky. My committee members, Dr. Ruth Elliott, Dr. Mark Gierl, Dr. Robin Everall, Dr. Len Stewin, and Dr. G. Adams guided and motivated me with their comments and questions. I am especially indebted to Dr. Mark Gierl for his extra help in all things statistical and his proclivity to challenge my every assertion to force me to become a better academic. A special thanks to Dr. Jeff Bisanz and Ms. Leslie Mackey for their patience and support during the last frantic months of this process.

I would like to thank my friends for keeping me sane outside of school. (A special merph to Carolynn). Without their wit, words of encouragement, and beer, I never would have made it. Take comfort in knowing you will never hear me say the words "working on my dissertation" again.

Last, there are no words to describe the unwavering support of my parents, Arvin and Jeannette Schnirer. Mom, Dad, and my brother Ken have always loved and believed in me and that has given me the strength and confidence to pursue new challenges. Thank you.

Table of Contents

Introduction 1

Introduction 1
Background 3
Focus 4
This Study 6
Ego Identity Development 7
Egocentrism 10
Research Questions 12
Method 14
Sample 16
Consent, Confidentiality and Privacy Issues 16
Instrument 19
Data Analysis 24
Delimitations 25
Limitations 26
Implications 26
Endnotes 28
References 29

Paper 1 - Adolescent Sexuality in a Developmental Context: Ego Identity 38

Introduction 38
Method 41
Sample 41
Instrument 41
Analysis 43
Results 45
Identity Analysis 46
One-Factor ANOVA 46
Background Variables 46
One-Factor ANOVA 46
Two-Factor ANOVA 47
Post-hoc Analysis 47

Sexual Beliefs/Attitudes 48
One-Factor ANOVA 48
Two-Factor ANOVA 49
Post-hoc Analysis 50
Interactions 51
Discussion 52
Implications 56
Conclusions 57
Endnotes 59
References 60

Paper 2 - Adolescent Sexuality in a Developmental Context: Egocentrism 64

Introduction 64
Method 68
Sample 68
Instrument 69
Analysis 69
Results 72
Discussion 75
References 78

Paper 3 - A Comparison of Predictors of Late Adolescent Risk-Taking 82

Introduction 82
Method 86
Sample 86
Instrument 87
Analysis 87
Results 89
Discussion 93
Conclusion 96
Endnotes 98
References 99

Summary & Implications 104

Summary 104
Question 1: Ego Identity 104
Question 2: Egocentrism 105
Question 3: Other Variables 107
Developmental 108
Interpersonal 109
Risk-Taking 111
Sexual Beliefs/Attitudes 112
Limitations 113
Sampling 113
Theoretical Constructs 115
Implications & Recommendations 116
Future Research 116
Methodological 119
The Last Word 120
References 123

Appendix A - Sample Letters 127

Appendix B - Consent Form 129

Appendix C - Instrument 130

I - General Information 131
II - New Personal Fable Scale (NPFS) 134
III - Sexual Attitudes 136
IV - Dating Behaviours 138
V - Sexual Behaviour 141
VI - Objective Measure of Ego Identity Status (OMEIS) 145
VII - Health - Related Behaviours 148

List of Tables

1-1 Percentage of the Sexual Activity Rating (SAR) as a Function of Gender 44

1-2 One-Factor Significant Mean Differences of Sexual Experience: Sexual Beliefs/Attitudes 49

1-3 Two-Factor Significant Mean Differences of Sexual Experience: Sexual Beliefs/Attitudes as Main Effects 50

1-4 Frequency of Belief by Identity Statement: 2 X 4 Chi Square Analysis 52

2-1 Outside Variables: General and Sexual 71

2-2 Sexual Activity Rating of Students By Gender 72

2-3 Personal Fable Constructs By Gender 73

3-1 Sexual Risk-Taking Rating (SRTR) of Students 89

3-2 Significant Regression Equations by Group 91

Introduction

In North America, the role of sexology in adolescence is debated among parents, teachers, health practitioners, religious leaders, and teenagers themselves. Opinions as to when is the right time to initiate sexual behaviour abound. There are those who believe that having sexual intercourse is an adult activity and that teenagers lack the physical, cognitive and emotional maturity to handle the responsibilities that come with being sexually active. Others view sexual activity as a natural, healthy part of adolescent development. Some believe that sexual intercourse is an act solely for the purpose of procreation within the sanctity of marriage. With such widely divergent views, it is doubtful that continued debate will result in consensus of opinion. There is hope that academic researchers can inform the discussion with their conclusions from quantitative and qualitative studies of adolescents' sexual behaviours and attitudes.

In the academic literature, researchers acknowledge that the problems and solutions associated with irresponsible sexual activity are multi-dimensional and inter-related. The interpersonal context in the form of familial, peer and community relationships seems to be associated with sexual activity. Further, these social learning influences also include the increasing number of sexual themes in the media (Brewster, Billy, & Grady, 1993; Crockett, Bingham, Chopak & Vicary, 1996; Holden, Nelson, Velasquez & Ritchie, 1993). Social factors such as minority status, delinquency, and substance abuse that seem to be related to sexual behaviour and attitudes should be

considered (Luster & Small, 1994; White & DeBlassie, 1992). Personality variables such as impulsivity, rebelliousness and risk-taking may also be instrumental (Harvey & Spigner, 1995; Hess & Short, 1995). Lastly, the following developmental constructs specific to the adolescent must be added to the above factors: puberty, adolescent cognitive changes, gender-role definitions, identity formation, and egocentrism. The issue is complex. Sexual activity, in the context of adolescence, is often different than adult sexuality. The cognitive, emotional and physical changes that occur during adolescence contribute to anxiety and confusion surrounding teen sexual issues by all concerned parties.

To complicate this problem further is the role of the wider environment. Are the attitudes and behaviours a group of adolescents experience inherent to the maturational process of development toward adulthood or are these experiences specific to the culture? Canadian researchers have difficulty answering this question because of the strong influence of American culture in Canada. Also, a plethora of American studies are regularly cited to support findings in Canadian samples. It seems that many authors assume that the two cultures are not different. But one must acknowledge that differences between the cultures do exist. For example, it has been found that the teenage pregnancy rate is twice as high in the United States as in Canada (The Alan Guttmacher Institute (AGI), 1999; AGI, 1994; Dworetzky, 1990)[1].

The purpose of this study and dissertation is to increase knowledge in the area of adolescent sexology by collecting current Canadian data to help better gauge Canadian adolescents' sexual attitudes and behaviours. Furthermore, I explore the relationship between their sexual behaviour and certain developmental constructs to better clarify their decision making process in this area. The long-term goal of this research is to develop an understanding of how adolescents make sexual decisions so that health practitioners, teachers and parents may be more pro-active in decreasing irresponsible sexual activity.

Background

Much of the research in adolescent sexuality is focused on descriptive studies. It is generally accepted that the rate of sexual activity has leveled off with 50 to 60% of adolescents reporting to have had intercourse by the age 18 (Conger & Galambos, 1997; Faulkenberry, Vincent, James & Johnson, 1987; Fehlauer, 1992; Katchadourian, 1993). However, some new trends exist:

1. The age of first sexual intercourse has been decreasing (Coker, Richter, Valois, McKeown, Garrison, & Vincent, 1994; de Gaston, Jensen, & Weed, 1995). In one Alberta community, of those teenagers who were sexually active, almost 80% began sexual activity *before* high school (Schnirer, 1996).
2. The number of partners is increasing (Besharov & Gardiner, 1993).

3. Adolescents seem not to use birth control consistently or properly despite increased reports of contraception use. Between 60 and 70% of adolescents report using some method of contraception during their *first* sexual experience (Forrest & Singh, 1990; Schnirer, 1996). Although this is considerably higher than was reported five years ago, teen pregnancy rates, one gauge of proper contraception use, is still problematic. Among sexually experienced teens, about 8% of 14 year olds, 18% of 15-17 year old and 22% of 18 -19 year olds become pregnant each year (AGI, 1994). McLean and Flanigan (1993) address this problem:

> Current research indicates that, on average, teenagers do not use birth control for the first nine months after the onset of intercourse. Further, more than one-half of all adolescents who become pregnant within two years of becoming sexually active do so in the first six months after the onset of sexual activity (p. 581).

Focus

It seems clear for researchers that having knowledge of adolescent sexual behaviour is important but understanding why and how they make their choices in sexual matters is more crucial. Knowing that half of Canadian adolescents are sexually active is less informative than knowing which adolescents choose to engage in sexual intercourse and for what reasons. It seems that one may hope to change the problematic behaviours associated with irresponsible sexual behaviour only when one has a clear understanding of the factors that affect their decision making. My focus has shifted

over the course of this research from that of obtaining normative and contemporary Canadian data (*"What are they doing?"*) to exploring the underlying theoretical basis for their actions (*"Why are they doing it?"*) while still collecting current data. Thus the overall goal of this study is to better understand the decision-making processes involved in adolescent sexual behaviour in order to encourage and influence individual sexual responsibility.

Explaining the adolescent decision-making process is a complex task: as with all human behaviour, there are many variables. However, trying to discover the possible links and explanations seems key to understanding adolescent sexuality. Schinke and Blyth (1981) suggest that adolescents need decision-making skills to handle peer pressure to engage in sex, and Langer and Warheit (1992) further speculate that when adolescents decide to postpone sex or partake in safe sex practices, they accept short-term inconvenience for long-term goals.

Adolescent decision-making is helped or hindered by teenagers' cognitive development. Attempts to clarify adolescent sexuality problems such as pregnancy by applying adult logic or reasoning often fail. It is sometimes difficult to understand why a teenager does not take the necessary precautions to avoid disease or pregnancy even when they can voice the often negative consequences of such choices. The first assumption would be to conclude that the young people lack the knowledge and/or skills that prepare them to make healthy sexual choices. The solution to problematic

adolescent sexual behaviours seems to be sex education, be it formal programs within the school or informally within the family system. But when teaching sex education fails to bring about lower pregnancy and sexually transmitted disease (STD) rates or prolong the time before first sexual intercourse, it is difficult to understand why. To clarify this problem, one must examine the sexuality choices of adolescents within a context broader than just sexual knowledge and skills. Adolescents are still growing and developing; physically, socially, cognitively and morally. Often members of society expect teenagers to behave in an adult manner even though they do not possess the intellectual tools and experience to do so. For example, Gruber and Chambers (1987) discuss the role of adolescent cognitive skills in sexual decisions:

> Perspective taking, the ability to "put yourself in someone else's shoes," provides the foundation for considering the feeling and concerns of a sexual partner, for learning from another's mistakes, or for following the lead of friends who contracept. Short-term planning or forethought allow adolescents to prepare for sexual activity (ie., to use a condom or insert a diaphragm) as well as to take note that a pill packet is almost empty and arrange for a new prescription (p. 667).

Their developmental stage and experiences affect all their decision-making, whether in their schooling or interpersonal relationships.

This Study

While the investigation of all developmental changes is beyond the scope of this project, two developmental constructs are explored. Specifically, adolescents' social

cognition, in the form of egocentrism, and the role of identity formation as it relates to adolescent sexuality will be the focus of this dissertation. Egocentrism and ego identity were chosen because of their plausible connection to sexuality, the implications suggested in others' research and because of the possible theoretical link between them (Adams, 1976; Protinsky & Wilkerson, 1986).

Ego Identity Development

It is regularly suggested that the search for an identity begins in adolescence, with the changes in cognitive development. Adolescents become aware of their thinking, are able to be more introspective and to think in more abstract terms. This heightened introspection often includes pondering every aspect of existence: personality, individuality, identity, beliefs, attitudes and status.

Erikson (1968) theorized that identity formation consists of two stages: the search for the answer to "who am I?" and quest for intimacy. This process, as Erikson suggests, comes about through phases and the resolution of crisis' at each phase is needed to proceed to the next for sound psycho-social health. In adolescence, the Identity vs. Identity Diffusion crises is a period in which the adolescent hopes to answer the question "who am I?". Having a healthy identity means:

> ...to maintain a balance between similarity and difference in the face of individual development and changing social conditions, so that one can assimilate to the self demands for change or adjustment, but also fulfil an inner desire for constancy. It is to be a whole and complete

> person, and not fragmented into roles and ruled by scripts. It is to be connected with others and yet true to oneself. It is to participate in a variegated and often fragmented social life and yet to maintain continuity and integrity. Persons with identity, we are apt to say, know who they are, what they are doing, and where they are going (Hewitt, 1989, p.152).

In this pursuit, adolescents try to integrate the subjective self with what they feel, experience and know. This is not easy, even for conforming teens, as a healthy identity involves continuity, differentiation and adaptability. In contrast to identity formation is identity diffusion, where because of a deficit in self-definition, adolescents lack direction, are confused and typically are threatened by anything that challenges them.

The importance of the relationship between identity and intimacy has been discussed in the literature as late adolescents try to resolve the Intimacy vs. Isolation stage of development. Erikson (1968) emphasized the importance of attaining a sense of identity before one could enter into an interpersonal intimate relationship with someone. It is only after adolescents have a better sense of self that they can partake in more effective and closer relationships as they are less likely to be absorbed with self thoughts and more able to engage in genuine concern for others. "It is only when identity formation is well on its way that true intimacy - which is really a counterpointing as well as a fusing of identities - is possible" (Erikson, 1968, p. 135). Orlofsky, Marcia, and Lesser (1973) reported that favourable resolution of the intimacy-isolation crisis was related to successful identity development. True intimacy is the

mutual sharing of self with another. One must know oneself in order to share oneself with another.

Shen (1982) suggested that experiencing sexual intimacy before acquiring a sense of identity is a common cause of adolescents' sexual problems. Hernandez and Diclemente (1992) investigated the role of self-control and identity development in male college students and found that those with lower scores for ego-development were significantly more likely to engage in sex without condoms.

Sullivan suggested that early sexual intercourse can also lead to a strong pre-occupation to satisfy the strong biological drive which in turn can "lead to serious deterioration of self-respect because this type of preoccupation literally interferes with almost any commonplace way of protecting one's self-esteem" (Sullivan, 1953, p. 273). "Adolescents have sex when, in fact, they primarily want and need something else, such as affection, to ease loneliness, to confirm masculinity or femininity, to bolster self-esteem, to express anger or escape from boredom" (Hajcak & Garwood, 1989, p. 55). Hajcak and Garwood (1989) also suggested that the need for love and affection are very deep and this may artificially intensify the sex drive.

Adolescents who have sex but have not established a strong identity and do not develop relationships of quality with their partners may end up having difficulty developing relationships of quality as adults. "When a youth does not accomplish intimate relationships with others in late adolescence or early adulthood, he may settle

for highly stereotyped interpersonal relations and come to retain a deep *sense of isolation*" (Erikson, 1968, p. 136). In reviewing the results of a qualitative study, Edwards (1995) suggests that achieving identity is the core variable that accounted for the differences between teenagers in their ability to handle the influences within the social, cultural, and environmental context of their lives, to develop relationships and to live according to their beliefs and intentions.

Identity is not a static state and continues to develop throughout life. Since it is during adolescence that one first develops a sense of self, circumstances could occur that would challenge even a strong sense of self. It is also possible that initial confusion and exploration are precursors for the development of a stronger sense of self that would enable individuals to take more control and responsibility for themselves.

Egocentrism

Like ego identity, much has been written about adolescent egocentrism. Adolescent egocentrism refers to the heightened self-consciousness of adolescents that is reflected in their belief that others are as interested in them as they themselves are. It also refers to their sense of personal uniqueness (Santrock, 1993). Elkind (1967) suggests two concepts that are central to the adolescent's belief in invulnerability, uniqueness and influence-- the imaginary audience and the personal fable.

The imaginary audience arises from adolescent's heightened sense of self-awareness. Because they are trying to understand themselves and are therefore so

focused on themselves (and able to perceive what others are thinking for the first time because of formal operational cognitions), adolescents believe that they are the center of attention. Typical teenagers try to anticipate how others will react to them in social situations. Problems arise because their anticipation is based on the idea that others view them as they view themselves. Further, Elkind (1967) suggests that some of an adolescent's withdrawal from family and friends and desire for privacy may be due to these feelings of intense scrutiny.

The personal fable stems from adolescents' belief in their immortality and personal uniqueness (Elkind, 1967). One may recognize the very familiar mantra of most teens: no one else in the world can possible understand how I really feel. These beliefs create an aura for adolescents: only they can suffer with such intense agony or experience such emotional highs. To retain this image, teens will create a personal fable or story that reflects their sense of uniqueness. Commonly, these personal fables contain beliefs of perpetuation and indestructibility: "Bad things can not happen to me because I am so different from other teenagers".

Lapsley (1993) and Mitchell (1996) have furthered Elkind's theory of adolescent egocentrism (1967) and suggested that it may be relevant to the problems encountered in adolescent sexuality. It is in adolescence, when formal thought capabilities are first apparent, that teenagers begin to explore and ponder complex issues, form hypotheses, and develop personal idealisms. However, egocentrism acts as a filter in which an

adolescent's entire world is distorted and censored based on his or her personal reality. The personal fable, with the accompanying beliefs of uniqueness, omnipotence and invulnerability, is central to the "It won't happen to me" syndrome because it can impair judgment. Further, this may predispose adolescents to high risk behaviours such as non responsible sexual decision-making. For example, it is puzzling that teenagers with comprehensive sex education still do not use contraception regularly and properly. Perhaps, they may *know* that they need to use a condom but they *believe* that they are too special or immortal for these rules to apply to them. For example, Green, Johnson and Kaplan (1992) found that cognitive egocentrism variables, not experience with contraceptives, were found to be significantly related to and predictive of 5 of the 7 contraception decision-making variables such as evaluating a situation, listing important factors and applying a solution to the problem.

Mitchell (1992) states that the personal fable phenomena is abundant when studying adolescent pregnancy. The vast majority of pregnant teens reported being "surprised" or "shocked" when they became pregnant because they believed themselves to be too young to become pregnant or that it just could not happen to them even when they understood their fertility cycle.

Research Questions

The purpose of this research study is to learn about adolescent behaviour and to attempt to understand adolescent decision-making with respect to sexual behaviour and

responsibility within a developmental context. The following questions are the focus of this research. Data were also collected on dating attitudes, behaviours and expectations as part of an ongoing study with Dr. G. Hess, Professor, Department of Educational Psychology, University of Alberta[2].

1. Is there an effect of identity development (diffusion, foreclosure, moratorium and identity achievement) and background variables (e.g., religiosity, alcohol/drug usage, parental communication, academic achievement) on the level of sexual activity?
2. Are adolescent personal fables concepts (omnipotence, invulnerability and personal uniqueness) combined with relevant background variables (e.g., impulsivity, peer influences, parental communication, academic achievement) predictive of sexual activity?
3. How well do groups of variables (developmental constructs such as age; interpersonal constructs such as familial relationships; risk-taking constructs such as alcohol/drug usage and sexual attitudes) predict irresponsible sexual experiences?

The background variables used to investigate these relationships are extensive and include variables not listed above. They are added to the analysis for two reasons: (a) all have repeatedly been linked in various studies to early sexual activity or irresponsible sexual decision-making, and (b) to acknowledge the complexity of the problem (perhaps it

is not just one construct or the other, but the *interaction* of variables that is key). In addition, for each question and subsequent paper, the background variables were chosen based on the connection to the developmental theory under investigation[3]. These variables include such things as communication and/or relationship with partner, friends and family (Ensign, Scherman, & Clark, 1998; Flick, 1986; Small & Luster, 1994); sexual knowledge and beliefs (Gordon, 1996; Lagana & Luciana, 1999); academic achievement (Schnirer, 1996); and other risk-taking indicators (Harvey & Spigner, 1995; Whitbeck, Conger, Simons, & Kao, 1993). For example, there is conflicting evidence about the role of religiosity in influencing level of sexual activity. One may anticipate that teenagers who are more religious will be less likely to be sexually active. However, as sexual activity may be seen as a reactive, norm-breaking action, other teens may "rebel" against this same religious doctrine by becoming sexually active. Coker et al. (1994) found it was "not associated consistently with an early age at first intercourse across all race and gender groups" (p.376). Brewster et al. (1993) also failed to find any significant relationships.

Method

The research plan involved the collection and analysis of quantitative data using a group administered questionnaire about adolescents' sexual behaviour, attitudes, and expectations.

As this is a continuation of previous research (Schnirer, 1996), there has been time to evaluate many of the issues that are germane to this research. The procedures

used in the current research program are fairly straightforward. However, if these procedures are to yield reliable and valid data, it is important that the atmosphere of the research be appropriate and conducive to honest reporting. The use of self-report, especially for investigating sensitive topics such as sexuality, can be problematic. One over-riding concern is the validity of the data. It is worrisome that teens will not be as candid about behaviours that are socially undesirable or that some teens may exaggerate their involvement. Alexander, Somerfield, Ensminger, Johnson and Kim (1993) investigated the problem of adolescent self-reports and came to the following conclusions:

> Our data showed clear developmental differences in the accuracy of self-reported sexual behaviors. This suggests that it may be more profitable in terms of data quality to begin asking students about their sexual behavior when they are in high school as opposed to middle school. (p.470)

Brink (1995) asked college students to rate how honest they would be on sensitive topics such as use of illegal drugs and sexual orientation and found that the two items least likely to elicit honest responses were number of sexual partners and frequency of sexual activity. More than one-fifth would not report accurately. However, researchers that use methods that build rapport, trust and understanding have been found to produce more valid results (Grossart-Maticek, Eysenck, & Barrett, 1993; Renzetti & Lee, 1993). Thus, before gathering data it is important to set up a trusting atmosphere. All those involved were debriefed on past research findings and provided a developmental

context. They must understand the purpose of the study. This type of research only works in a truly cooperative setting (see section on Consent, Confidentiality and Privacy Issues below).

Sample

The sample consists of late adolescents from an urban Canadian university. This age have been chosen for many reasons: (a) Older adolescents yield more accurate data (see above), (b) the ego-identity and personal fable instruments within the survey had clear college-aged norms, (c) pragmatically, it is much easier to gain consent of students over the legal age, and (d) as this is a new research venture, I wanted a more manageable study in which to test the theories before applying them to a larger, more complex design. For this study, "late adolescents" are defined as an individual up to age 22. Only adolescents that were sexually active voluntarily were included as incidents of rape or incest are not part of healthy, normal sexual development.

Consent, Confidentiality and Privacy Issues

Students are voluntarily asked to partake in the study by the researcher as part of a guest lecture she gave to numerous second year undergraduate classes on adolescent sexuality in Alberta. The purpose of the research was explained and students had the opportunity to engage in a discussion with the researcher prior to the administration of the questionnaire. Students were given a letter outlining the study and the consent form (see Appendix A: sample letters and Appendix B: consent form). Positive, written

consent was required from all students. The letter addressed the purpose and importance of the research, the task to be performed, rights of the students, the researchers involved and other details that are crucial for an informed choice.

In addition to the above consent procedure, certain special considerations were applied. Students were reassured both verbally and on the questionnaire that anonymity and confidentiality are assured. Only the researcher(s) were allowed to view the completed questionnaires. This is to assure students that the data will not be used by people in power positions in their lives (i.e., professors, administration, parents). Students were informed that they are free to opt out of the study at any stage by simply withdrawing their consent.

This project has been designed with concern about privacy and the following measures were instituted to protect the student's privacy:

1. The administration of the survey was done by the researcher or research assistant, who had no prior relationship with the three large introductory undergraduate classes[4], thus ensuring anonymity.
2. A null response had been added for every question. This was so that students would not have to skip large segments and therefore be finished sooner leaving themselves open to detection as someone who was not sexually active.

3. The students were never required to identify themselves by name or ID number. Professors, administrators, parents, etc. did not have access to the original questionnaires.
4. After having completed the questionnaire, all students placed them in individual, sealed non-descript envelopes. They were then collected by a research assistant or the researcher and placed in a large box to be randomly shuffled with surveys from other classes.
5. All the original questionnaires are stored in a locked facility and will be destroyed after the appropriate time period.
6. Throughout the survey, the participants are reminded of anonymity and confidentiality in the instructions

When investigating sensitive issues, especially sexual behaviour and attitudes, some latent or problematic consequences may arise such as past sexual abuse. In the information letter, all participants are given my phone number, e-mail address and office address. Students are made aware that more information on sexuality, contraceptives and relationships is available at several agencies on and off campus. Finally, it was emphasized that myself and Dr. Hess (Co-Investigator, Chartered Psychologist) will gladly answer their questions or refer them to someone who can help.

Instrument[5]

A version of this questionnaire had been used previously in two studies (Fehlauer, 1992; Schnirer, 1996). It was originally developed by the researchers based on previous research, on personal classroom and counseling experiences, and after consultation with other educators at the high school and university levels. Over the past year, it has undergone several revisions (Edwards, 1996). There had been some problematic items that needed to be clarified and new items were needed to further explain behaviour and attitudes. In addition, two new sections measuring the identity and personal fable constructs were included. The revised instrument has been piloted with the following diverse adolescent groups: "typical" teens, a church youth group, pregnant teens and/or teen parents, and gay and lesbian teens. Their feedback has helped address problems such as readability and/or confusing and omitted issues. The total instrument consists of seven sections. A substantial amount of data were collected to be analyzed at a later date. The results and discussion of Section IV have not been included in this dissertation although a brief background of its purpose is included below.

Section I includes demographic and background information consisting of gender, grade, living arrangement, parental occupation, educational data, future aspirations, and perceived peer and family relationships.

The constructs of invulnerability, omnipotence and personal uniqueness in adolescent egocentrism are measured in Section II using The New Personal Fable Scale (Lapsley, 1988). It consists of 46 items on a Likert Scale and provides levels of reliability ranging from .70 to .92.

Section III consists of questions that probe adolescents attitudes and opinions on some sexual issues such as premarital sex, communication about sexual topics, reasons for having sex, and pregnancy. They had been compiled after reviewing the sexuality literature and edited in consultation with Edwards (1996) during our instrument revision.

Section IV is based on a Collins (1974) study on the comparison between peer-expectations of dating behaviour and actual dating behaviour. Collins (1974), in his study in Australia, surmised that perhaps much of the confusion about teenage sexual behaviour and expectations lies in the uncertainty surrounding the norms of the peer group and that the ambiguous messages they receive are of little help in making their own decisions. He questioned students individually as to what percentage of males and females did they think were engaging in various levels of sexual behaviour (kissing, touching, having sexual intercourse) at various level of commitment (with an acquaintance, on a first date, when going steady, when considering marriage). He found that adolescents' expectations about their peers' sexual behaviour far exceeded their admitted sexual interaction. It would seem that a prime motivation for engaging

in sexual behaviour was their belief that "everybody else" was doing so. Collins' findings seemed to fit with clinical experience in working with teenagers. Therefore, when designing the questionnaire for the current program of research, questions replicating those of Collins were included. However, analysis of the data from 300 students in a suburban/rural school in central Alberta raised more questions. It was found that if all students were included in the analysis, Collins' conclusions were confirmed. However, if students who had not experienced a certain level of commitment were dropped from that portion of the analysis, a different picture emerged. Analyzing the data using a diminishing sample size, it was found that students' expectations about their peers' behaviour almost matched their own reported behaviour. The revised analysis seems more reasonable since students who have not experienced a certain level of commitment may be unable to realistically imagine accompanying sexual behaviour. It seems to be that students in that particular school had a very clear picture of their peers' sexual behaviour. Is that because the school is small and most of the students have been together for ten to twelve years? Are these students typical or atypical? Analyzing data from more students may answer the question. The questions themselves consist of students being asked at different dating levels (first date, going steady etc.) what level of intimacy (kissing, heavy touching, sex) they expect transpires with their peers. In the second part, they are asked for their

own behaviour at each dating level. These data were collected and will be analyzed at a future date.

Section V is a more detailed inquiry into the participants' dating history and sexual behaviour. Questions consist of age of first intercourse, contextual variables (role of alcohol or drugs), frequency of sex, number of partners, type of contraception used, pregnancy and STDs issues. To protect student confidentiality, this section has been designed so that students must answer every question, regardless of whether they are sexually active or not.

Section VI is the Objective Measure of Ego Identity Status Instrument (OMEIS) (Adams, Bennion, & Huh, 1989), created to measure identity development. OMEIS is based on the theoretical framework of Erikson and the operationalized concepts of Marcia (1966). Marcia drew on two of the major dimensions of Erikson's theory of identity formation, which included the presence or absence of a crisis period or a period of exploration and the presence or absence of a clearly defined and stable commitment to values, beliefs, and standards. Youths that do not experience the need to explore alternatives and have not yet established commitments are referred to as "Identity Diffused". A second group of youths includes those who have not gone through an exploratory process but have adopted commitment to life from other people, or their parents, and these teens are identified as "Identity Foreclosed". A third category includes those who are actively exploring life alternatives but have not yet

arrived at their own commitments ("Moratorium"). Lastly, the highest level of identity development are those who have gone through an exploratory period of time and subsequently identified their own personal and unique ideological commitments ("Identity Achieved").

The complete OMEIS consists of 64 items, although with the approval of the authors, only 32 items were used in our survey. This decision was made based on time considerations. Adams (1996) agreed that only one statement, instead of two, would still adequately measure each concept and maintain the integrity of the instrument. The estimates of internal consistency as an indicator of reliability ranged from .58 to .80 as measured by Cronbach's alpha. The expected relationships between the identity status subscales showed evidence for discriminate and convergent validity. Estimates of concurrent and predictive validity were estimated by correlations between the identity subclass and measures of self-acceptance, intimacy and authoritarianism. These associations were theoretically consistent. Face validity was addressed by the ratings of a panel of trained student judges. After brief training in the basic construct of ego identity development they were able, with 94.6% agreement, to judge the new items as representative of the appropriate status (Adams, Shea, & Fitch, 1979; Adams, Bennion, & Huh, 1989; Grotevant & Adams, 1984).

Finally, Section VII is divided into two parts: general health-related behaviours and open-ended questions. The health portion asks the students about certain risk

taking behaviours such as alcohol, drug and nicotine usage. Open-ended questions are also included to allow students to add any additional information or opinions; their responses will help clarify responses and give important nondirective information about this topic.

Data Analysis

The sexual activity of adolescents encompasses a wide spectrum of behaviours. In most research, being sexually active is usually defined as having had vaginal sexual intercourse *once*. And so, those students who just want to rid themselves of the "stigma" of being a virgin and then return to celibacy are grouped with sexually active students who may have had frequent sexual intercourse or have engaged in intercourse with many partners. This researcher believes that engaging in intercourse once or twice is different from an ongoing sexual experience. It is deceptive to group adolescents with such different experiences into one class.

Concerned with the above definition of sexually active, a Sexual Activity Rating (SAR) scale (Hess & Schnirer, 1998) was used to better gauge sexual activity. Students are assigned a rating based on their answer to four questions: number of partners, age at first intercourse, frequency of intercourse, and whether or not one had been pregnant (or their partner had been pregnant, in the case of males). Students are allotted a score from 0 to 3 on each of the dimensions, the combined score being their Sexual Activity Rating[6].

In all the data analyses, each students' Sexual Activity Rating was the dependent variable. The primary data is nominal (e.g., identity level) and/or ordinal (e.g., frequency of drug usage). To examine the effect of level of identity (diffusion, foreclosure, moratorium and achievement) and background factors (alcohol usage, religiosity etc.) a series of univariate one-factor and two-factor analysis of variance (ANOVAs) were conducted. To identify the role of personal fable constructs (omnipotence, invulnerability and personal uniqueness) and background factors, a series of multiple regression equations were used. Multiple regression analyses were also used to assess which group variables best predicted sexual risk-taking (Question #3).

Delimitations

Since data were collected through a large urban undergraduate university, those students that do not attend university are not in the sample. As the goal of this study was to explore the possible relationships between the theoretical constructs and sexual behaviour and attitudes, the significant findings found will be used to expand future research by testing these theoretical links in a more diverse adolescent sample.

Secondly, the theoretical constructs used and operationalized are based on Elkind's egocentrism and Erikson's ego identity theories. Alternative theories of identity and egocentrism, such as Gilligan's (1982) theories of morality and identity, will be left for further research.

Limitations

As acknowledged in the beginning of this introduction, adolescent sexuality is influenced by many social, cognitive and developmental factors. While I am aware of this complexity, there are certain factors that have been purposely unaddressed so as to design a manageable and interpretable study. For example, the role of the media is certainly pertinent as sexual images and lyrics are prevalent in contemporary music, film and literature. Given the pervasiveness of the media, most adolescents have been exposed to sexual imagery. But the relationship between adolescent attitudes and behaviours and the media portrayal has been neither direct nor clear. Some research has found a linear relationship between popular media exposure and adolescent sexual permissiveness (Brown & Newcomer, 1991; Strause & Buerkel-Rothfus, 1987). However, other researchers have found no relationship (Soderman, Greenberg, & Linsangan, 1988; Wright & Anderson, 1989) or that the relationship is moderated by other characteristics such as gender and family environment (Strause, Buerkel-Rothfuss & Long, 1995). Thus, the role of the media is beyond the overall of addressing the developmental focus of the dissertation.

Implications

The format of this dissertation, that of academic papers instead of a traditional thesis, is in keeping with a major goal in pursuing this research: that of providing (a) late adolescent sex educators such as physicians and practitioners (Planned Parenthood,

university clinics) and (b) researchers with current, relevant information. Having the research in a paper format expedites the dissemination of findings. It seems crucial to normalize the sexual experiences of adolescents. Adolescents need to know current information about our teens in order to make informed decisions about their own sexual behaviour. Parents need information on the behaviour of "typical teenagers" so that they can guide their own adolescents and/or modify their own views. Educators need the information to plan prevention and intervention programs. The grass-roots approach to the dissemination of the findings is deemed necessary in order to educate the front-line adolescent workers about the attitudes, behaviours and expectations of Alberta youth. In addition, by publishing the results of this research, other researchers and clinicians can hopefully benefit.

Endnotes

[1] In 1996, the adolescent pregnancy rate in the United States was 97 pregnancies per 1,000 (aged 15-19)

[2] This is the third data collection from Alberta students. The first phase of the study was carried out with a sexual behaviour questionnaire designed and piloted for students in a suburban high school. After administering the questionnaire to an entire school population (approximately 300 students), results were analyzed and conclusions were presented to the students, parents, teachers, and area school administrators (Fehlauer, 1992). A revised version was administered to the entire school population of two rural secondary schools (approximately 500 students in grades 9-12) (Schnirer, 1996).

[3] As the background variables were the crux of Question 3, please see Paper 3 Introduction for a more detailed review of these variables.

[4] For one class, the researcher was the principal instructor. For the other two classes, the researcher was the guest lecturer.

[5] See Appendix C for copy of Instrument

[6] This rating scale was expanded for the third paper to include indicators of sexual risk-taking such as use of contraception.

References

Adams, G.R. (1976). Personal identity formation: A synthesis of cognitive and ego psychology. Adolescence, 12, 151-164.

Adams, G.R. (1996). Personal communication and correspondence with Dr. J. Edwards.

Adams, G.R., Shea, J., & Fitch, S.A. (1979). Toward the development of an objective assessment of ego-identity status. Journal of Youth and Adolescence, 8, 223-237.

Adams, G.R., Bennion, M., & Huh, C. (1989). Objective Measure of Ego Identity Status: A Reference Manual. Guelph, Ontario: University of Guelph.

The Alan Guttmacher Institute (AGI). (1994). Sex and America's Teenagers. New York: Author.

The Alan Guttmacher Institute (AGI). (1999). Why is teenage pregnancy declining? The roles of abstinence, sexual activity and contraceptive use. Occasional Report. Retrieved from the Web 12/17/99. http://www.agi-usa.org/pubs/or_teen_preg_decline.html#2

Alexander, C.S., Somerfield, M.R., Ensminger, M.E., Johnson, K.E., & Kim. Y.J. (1993). Consistency of adolescents' self-reports of sexual behavior in a longitudinal study. Journal of Youth and Adolescence, 22, 455-471.

Besharov, D.J., & Gardiner, K. N. (1993). Truth and consequences: Teen sex. In The American Enterprise. (pp. 52-59). NY: American Enterprise Institute for Public Policy Research.

Brewster, K.L., Billy, J.O.G., & Grady, W.R. (1993). Social context and adolescent behavior: The impact of community on the transition to sexual activity. Social Forces, 7, 713-740.

Brink, T.L. (1995). Sexual behavior and telling the truth on questionnaires. Psychological Reports, 76, 218.

Brown, J.D., & Newcomer, S.F. (1991). Television viewing and adolescents' sexual behavior. Journal of Homosexuality, 21, 77-91.

Coker, A.L., Richter, D.L., Valois, R.F., McKeown, R.E., Garrison, C.Z., & Vincent, M.L. (1994). Correlates and consequences of early initiation of sexual intercourse. Journal of School Health, 64, 372-377.

Collins, J. K. (1974). Adolescent dating intimacy: Norms and peer expectations. Journal of Youth and Adolescence, 3, 317-328.

Conger, J.J., & Galambos, N. L. (1997). Adolescence and youth: Psychological development in a changing world. New York: Addison Wesley Longman.

Crockett, L.J., Bingham, C.R., Chopak, J.S,. & Vicary, J.R. (1996). Timing of first sexual intercourse: The role of social control, social learning, and problem behavior. Journal of Youth and Adolescence, 25, 89-111.

de Gaston, J.F., Jensen, L., & Weed, S. (1995). A closer look at adolescent sexual activity. Journal of Youth and Adolescence, 24, 465-479.

Dworetzky, J.P. (1990). Introduction to child development (4th ed.). St. Paul, MN: West.

Edwards, A.J. (1996). Identity achievement and adolescent sexual behavior. Unpublished research report. Edmonton, Alberta: Author.

Edwards, A.J. (1995). A theory of adolescent sexual behavior. Unpublished doctoral dissertation, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Elkind, D. (1967). Egocentrism in adolescence. Child Development, 38, 1025-1034.

Ensign, J., Scherman, A., & Clark, J.J. (1998). The relationship of family structure and conflict to levels of intimacy and parental attachment in college students. Adolescence, 33, 575-583.

Erikson, E.H. (1968). Identity: Youth and crisis. New York: W. W. Norton & Company.

Faulkenberry, J.R., Vincent, M., James, A., & Johnson, W. (1987). Coital behaviors, attitudes and knowledge of students who experience early coitus. Adolescence, 22, 321-332.

Fehlauer, E. (1992). Attitudes, influences and expectations of adolescent dating behaviors: A survey of high school students. Unpublished Masters Thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Flick, L.H. (1986). Paths to adolescent parenthood: Implications for prevention. Public Health Reports, 101, 132-147.

Forrest, J.D., & Singh, S. (1990). The sexual and reproductive behavior of American women. Family Planning Perspectives, 22, 206-214.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Gordon, C.P. (1996). Adolescent decision making: A broadly based theory and its application to the prevention of early pregnancy. Adolescence, 31, 561-585.

Green, V., Johnson, S., & Kaplan, D. (1992). Predictors of adolescent female decision making regarding contraceptive usage. Adolescence, 27, 613-632.

Grossart-Maticek, R., Eysenck, H.J., & Barrett, P.T. (1993). Predictions of cancer and coronary heart disease as a function of method of questionnaire administrations. Psychological Reports, 73, 943-959.

Grotevant, H.D., & Adams, G.R. (1984). Development of an objective measure to assess ego identity in adolescence, validation and replication. Journal of Youth and Adolescence, 13, 419 - 438.

Gruber, E., & Chambers, C.V. (1987). Cognitive development and adolescent contraception: Integrating theory and practice. Adolescence, 22, 661-670.

Hajcak, F., & Garwood, P. (1989). Quick fix sex: Pseudosexuality in adolescents. Sex Information and Education Council of Canada, 4, 55-58.

Harvey, S.M., & Spigner, C. (1995). Factors associated with sexual behavior among adolescents: A multivariate analysis. Adolescence, 30, 253-264.

Hergenhahn, B. R. (1990). An introduction to theories of personality (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Hernandez, J.T., & Diclemente, R.J. (1992). Self-control and ego identity development as predictors of unprotected sex in late adolescent males. Journal of Adolescence, 15, 437-447.

Hess, G.C., & Schnirer, L.A.J. (1998). Research concerns in obtaining valid survey data about adolescents' sexual behaviours. In J. J. Borras-Valls & M. Perez-Conchillo, (Eds.), Sexuality and Human Rights (pp. 303-306). Valencia, Spain: Instituto de Sexologia y Psicoterapia Espill.

Hess, G.C. & Short, R.H. (1995, July). Risk-taking in early adolescence: Implications for planning sex education curricula. Paper presented at the XVIII International School Psychology Colloquium, Dundee, Scotland.

Hewitt, J.P. (1989). Dilemmas of the American self. Philadelphia, PA: Temple University Press.

Holden, G.W., Nelson, P., Velasquez, J., & Ritchie, K.L. (1993). Cognitive, psychosocial, and reported sexual behavior differences between pregnant and nonpregnant adolescents. Adolescence, 28, 557-572.

Katchadourian, H. (1993). Sexuality. In S. S. Feldman & G. R. Elliott (Eds.), At the threshold: The developing adolescent (pp.330-351). Cambridge, MA: Harvard University Press.

Lagana, L., & Luciana, H. (1999). Psychosocial Correlates of Contraceptive Practices During Late Adolescence. Adolescence, 34, 463-483.

Langer, L.M., & Warheit, G.J. (1992). The pre-adult decision-making directedness/orientation to adolescent health-related attitudes and behaviors. Adolescence, 27, 919-948.

Lapsley, D. K. (1988). New Personal Fable Scale. Unpublished inventory, used by permission of the author.

Lapsley, D. K. (1993). Towards an integrated theory of ego development: The "new look" at adolescent egocentricism. American Journal of Orthopsychiatry, 63 , 562-571.

Luster, T., & Small, S.A. (1994). Factors associated with sexual risk-taking behaviors among adolescents. Journal of Marriage and the Family, 56, 622-632.

Marcia, J. (1966). Development and validation of ego-identity status. Journal of Personality and Social Psychology, 3, 551- 558.

McLean, A.L., & Flanigan, B.J. (1993). Transition-marking behaviors of adolescent males at first intercourse. Adolescence, 28, 579-594.

Mitchell, J. J. (1996). Adolescent vulnerability. Calgary: Detselig.

Mitchell, J. J. (1992). Adolescent struggle for selfhood and identity. Calgary, Detselig.

Orlofsky, J., Marcia, J., & Lesser, I. M. (1973). Ego identity status and the intimacy versus isolation crisis of young adulthood. Journal of Personality and Social Psychology, 27, 211-219.

Protinsky, H., & Wilkerson, J. (1986). Ego identity, egocentrism, and formal operations. Adolescence, 21, 461-466.

Renzetti, C.M., & Lee, R.M. (Eds.). (1993). Researching sensitive topics. Newbury Park, CA: Sage.

Santrock, J.W. (1993). Adolescence: An introduction. Madison, WI: Brown and Benchmark.

Schinke, S.P., & Blythe, B.J. (1981). Cognitive-behavioral prevention of children's smoking. Child Behavior Therapy, 3, 25-42.

Schnirer, L. (1996). Adolescent sexuality in rural Alberta. Unpublished master's thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Shen, J.T.Y. (1982). Adolescent sexual behaviour. Adolescent Sexuality, 71, 46-55.

Small, S.A., & Luster, T. (1994). Adolescent sexual activity: An ecological, risk-factor approach. Journal of Marriage and the Family, 56, 181-192.

Soderman, A.K., Greenberg, B.S., & Linsangan, R. (1988). Television and movie behaviours of pregnant and non-pregnant adolescents. Journal of Adolescent Research, 3, 153-170.

Strouse, J.S., Buerkel-Rothfuss, N., & Long, E.C.J. (1995). Gender and family as moderators of the relationship between music video exposure and adolescent sexual permissiveness. Adolescence, 30, 505-521.

Strouse, J.S., & Buerkel-Rothfuss, N. (1987). Self-reported media exposure and sexual attitudes and behaviors of college students. Journal of Sex Education and Therapy, 13, 43-51.

Sullivan, H. S. (1953). The interpersonal theory of psychiatry. New York: W. W. Norton.

Whitbeck, L.B., Conger, R.D., Simons, R.L., & Kao, M.Y. (1993). Minor deviant behaviors and adolescent sexual activity. Youth & Society, 25, 24-37.

White, S.D., & DeBlassie, R.R. (1992). Adolescent Sexual Behavior. Adolescence, 27, 183-191.

Wright, R., & Anderson, V. (1989, November). The impact of electronic media on sexual attitudes of adolescents. Paper presented at the meeting of the National Council on Family Relations, New Orleans, LA.

Adolescent Sexuality in a Developmental Context: Ego Identity

Introduction

According to Erikson's psychosocial developmental theory, the primary goal during adolescence is to resolve the identity versus identity role confusion stage by forming an integrative and stable concept of self. In order to accomplish this, an adolescent partakes in active exploration, which is accompanied by variations in ego strength (Erikson, 1959). They experience periods of confusion, discomfort, ego defenses, acting-out and impulsivity (Erikson, 1956, 1968). "Each stage becomes a crisis because incipient growth and awareness in a significant part function goes together with the shift in instinctual energy and yet causes specific vulnerability in that part" (Erikson, 1959, p. 56). The "identity crisis", coined by Erikson and often cited in popular culture, concerns a general sense of role confusion and adolescence vulnerability: "...adolescent love is an attempt to arrive at a definition of one's identity by projecting one's diffused self-image on another and by seeing it thus reflect and gradually clarified" (Erikson, 1968, p.132).

Marcia (1966) drew on two of the major dimensions of Erikson's theory of identity formation, which included the presence or absence of a crisis period (or a period of exploration) and the presence or absence of a clearly defined and

stable commitment to values, beliefs, and standards. Marcia's four identity status' are:

1. Diffusion: Youths that do not experience the need to explore alternatives and have not yet established commitments.
2. Foreclosure: A second group of youths includes those who have not gone through an exploratory process but have adopted commitment to life from other people, or their parents.
3. Moratorium: A third category includes those who are actively exploring life alternatives but have not yet arrived at their own commitments.
4. Identity Achievement: The highest level of identity development are those who have gone through an exploratory period of time and subsequently identified their own personal and unique ideological commitments.

These four ego identity status' have long been thought of as somewhat progressive, as early adolescents start at diffusion and work towards achievement. However, this strict linear progression has not been empirically supported (Bilsker & Marcia, 1991).

Many ideological variables such as risk-taking, sensation seeking, intimacy, autonomy and interpersonal relationships have been found to be core

factors to identity development (Eliason, 1995; Orlofsky, Marcia, & Lesser, 1973) and linked to sexual decision-making (Metzler, Noell, Biglan, & Ary, 1994; Rawlings, Boldero, & Wiseman, 1995; Tubman, Windle, & Windle, 1996). Mitchell (1992) remarks on this connection between identity and relationships:

> ... genuine friendship requires both a self-knowledge and a maturity of identity which is lacking (actually, still forming) in many youngsters. Their relationship, an affiliation which generates powerful, genuine emotions but which may not as yet answer the requirements of friendship or love. However, learning to distinguish such forms of emotionalized affiliation from love or friendship is a major task of adolescence, and a critical achievement in the formation of a mature personal identity (p. 79).

Despite these theoretical links, there have been few direct empirical investigations into the relationship between ego identity and adolescent sexuality. Are those with a better sense of "self" (achievement) sexually different than those that are not? Are student's that have internalized parental or religious values at a young age (foreclosure) less sexually active? In other words, is there an effect of identity development (diffusion, foreclosure, moratorium and identity achievement) and/or background variables (religiosity, alcohol/drug usage, parental communication, academic achievement etc.) on the level of sexual activity?

Method

Sample

The sample consists of 146 late adolescent undergraduate students[1] from a large Canadian university (undergraduate enrollment ≈ 30 000). Late adolescents are defined in this study as students working on their first degrees, up to age 22. This age was chosen for many reason. First, early and middle adolescents are rarely represented in the later identity stages, especially achievement, a fact that is in keeping with Marcia's original conceptualization of crisis and commitment in which older adolescents are likely to be more actively engaged in decision-making in areas such as occupations (Flum, 1994). Second, even though the ego-identity status instrument used is recommended for ages 15 to 30, it is normed on a late adolescent college population which facilitates making valid status decisions. Last, the students were from the Faculties of Education, Arts and Science and were taking an undergraduate course that covered developmental issues, including adolescent sexuality. The majority were in the second year of their program (72.6%) although the range included first to fourth year students.

Instrument

Data were gathered using a comprehensive questionnaire, forms of which had been used in two previous studies (Fehlauer, 1992; Schnirer, 1996).

Recent revisions (Edwards, 1996) included the addition of measures of ego-identity and adolescent egocentrism. Data collected include demographic and background information (gender, living arrangement, parental occupation, perceived peer and family relationships, sexual attitudes, sexual behaviours and other pertinent health or associated activities (e.g., drug/alcohol usage).

Ego-Identity status was measured by the Objective Measure of Ego Identity Status (Adams, Bennion & Huh, 1989). It is normed for a college-age population with significant cut-off scores one deviation above the mean. Students are classified according to three rules: (a) If they score one deviation above the mean or higher while all the other scores are below the cutoff (*pure* identity status), (b) the highest status is chosen when all scores are below the cut-off (*low profile* status), and (c) if two identity status are above the cut-off, the lower status is chosen (*transitional* status). As recommended by the author, before combining all the statuses, one has to test to see whether there was a difference between the status groups depending on which rule was used to classify the status. Analysis was run on the dependent variable "sexual experience" to test for equivalence of method of classification. There was no significant difference ($\underline{F}(4, 119) = .669$, $\underline{p} > .05$), thus all analyses were run with the statuses combined. In other words, it did not make a difference whether the

students arrived in their status (Diffusion, Foreclosure, Moratorium or Achieved) by pure identity status, low profile status or transitional status.

Analysis

The self-reported data were first analyzed using a one-factor analysis of variance (ANOVA). Background variables, including sexual attitudes/beliefs and identity status were used as independent variables with sexual experience as the dependent variable. The background variables[2] consisted of demographic information including age, university grade point average (GPA), church attendance, religiosity, parenting style, relationship with parents, parental/student sex dialogue, tobacco usage, alcohol usage, illegal drug usage and sexual attitudes and beliefs such as thoughts on pre-marital sex. Data were then analyzed using a two-factor (identity status X background variables/sexual attitudes/beliefs) ANOVA design to test for potential interactions. The Tukey multiple comparison method was used for all post-hoc analyses in the one- and two-factor ANOVAs.

"Sexual activity" encompasses a wide spectrum of behaviours from holding hands to oral sex to sexual intercourse. To define "being sexually active" is a difficult task. In most research, being sexually active is usually defined as having had sexual intercourse once. And so, those students who just want to rid themselves of the virgin status and then return to celibacy are grouped with sexually active students who frequently have sexual intercourse with many partners. The

author believes that engaging in intercourse once or twice is different from an ongoing sexual experience and adolescents with such a wide range of experiences should not be viewed as a homogeneous group.

Concerned with the above definition of sexually active, a Sexual Activity Rating (SAR) Scale (Hess & Schnirer, 1998) was used to better understand the continuum of sexual activity. Students were assigned a rating based on their answer to four questions: number of partners, age at first intercourse, frequency of intercourse, and whether or not one had been pregnant (or their partner had been pregnant, in the case of males). Students were given a score from 0 to 3 on each of the dimensions and the combined score was their SAR scale score.

The following descriptive statistics were the basis for the Sexual Activity Rating Scale (see Table 1-1). Of the 146 students, 103 (70.5%) have had sexual

Table 1-1

Percentage of the Sexual Activity Rating (SAR) as a Function of Gender

Sexual Activity Rating	Males (%)	Females (%)	Total Sample (%)	Cumulative Frequency
1 (virgin)	35.7	28.4	29.9	29.9
2 (low)	32.1	16.4	19.4	49.3
3 (moderate)	28.6	44.0	41.0	90.3
4 (high)	3.6	11.2	9.7	100

Note. N= 144 students

intercourse at least once. There was no significant gender variability: χ^2 (1, N = 146) = .654, p > .05. The majority of subjects' (60.0%) age of first sexual intercourse was 17 or over. The students' reported the following number of sexual partners: 1 partner, 41.7%; 2 partners, 24.3%; 3-4 partners, 14.6% and 5 or more partners, 18.4%. Seven students reported having had sexual intercourse only once (6.8%). Twenty-two percent have sex monthly or less. Approximately 37% have sex weekly and 33% have sex more than once a week. Nine females had been, or were currently, pregnant. None of the males reported that their partners had been or were currently pregnant. The sexual activity range was between 0 (virgins) to 13 (highest sexual activity rating). These numeral ratings were further combined into 4 categories. This SAR comprised the dependent variable of sexual experience. There were no significant gender differences (F(1, 144) = 3.261 p > .05).

Results

As aforementioned, two analyses were used, a one-factor and two-factor ANOVA. In reporting the outcomes, the results have been divided into four areas: (a) the results of the one-factor ANOVA using identity status as the independent variable; (b) the background variables in the one-factor ANOVAs and two-factor (background variables X identity status) analyses; (c) the sexual attitudes/belief as the independent variables in the one-factor ANOVAs and the two-factor (sexual attitudes/beliefs X identity status) analyses; and (d) any

interactions that were found in the two-factor analyses. The majority of two factor analyses that were found to be statistically significant were independent of identity status interactions.

Identity Analysis

One-Factor ANOVA. Out of 120 students, the following frequencies of identity status were found: Diffusion, 20.0%; Foreclosure, 10.8%, Moratorium, 11.7%; and Achievement, 57.5%. Identity status in order according to the highest mean SAR[3] were Achievement ($\underline{M}$= 2.54), Diffusion ($\underline{M}$=2.42), Moratorium ($\underline{M}$=2.07) with Foreclosure with the lowest ($\underline{M}$ = 1.46). A significant mean difference was found between identity status in relation to sexual activity ($\underline{F}(3, 118) = 4.846$ $\underline{p} < .01$). The SAR scores of the students in the "Foreclosure" status were significantly lower than the mean SAR scores of students in both "Diffusion" and "Achievement" identity status.

Background Variables

The following are the background variables in both the one-factor and two-factor analyses that yielded a significant F value. The specific mean differences found in the post-hoc analysis were identical unless otherwise stated.

One-Factor ANOVAs. There was a significant mean difference in sexual experience, as rated by the Sexual Activity Rating Scale, on the following independent variables: age ($\underline{F}(4, 139) = 3.843$ $\underline{p} < .01$), initial dating age ($\underline{F}$(3,

139) = 8.426 $p < .001$), alcohol usage ($F(2, 137) = 12.263$ $p < .001$), relationship with mother ($F(1, 142) = 4.191$ $p < .05$), impulsivity ($F(1, 142) = 3.283$ $p < .05$), religious service attendance ($F(1, 121) = 6.037$ $p < .05$), peers influence ($F(1, 140) = 8.573$ $p < .005$), high school team sport participation ($F(1, 142) = 4.402$ $p < .05$), trouble avoidance ($F(1, 141) = 5.038$ $p < .05$), and communication with parents about sex ($F(2, 136) = 3.531$ $p < .05$).

Two-Factor ANOVAs. In the two-factor (background variables X identity status) ANOVAs, all identity main effects were significant and the post-hoc mean differences were as reported in the Identity one-factor analysis. The background variables found to be significant main effects are as follows: age ($F(4, 111) = 3.727$ $p < .01$), initial dating age ($F(3, 104) = 4.807$ $p < .01$), alcohol usage ($F(2, 107) = 3.962$ $p < .05$), relationship with mother ($F(1, 112 = 3.875$ $p < .05$), impulsivity ($F(1, 111 = 4.826$ $p < .05$), and high school team sport participation ($F(1, 111) = 5.595$ $p < .05$).

Post-hoc Analysis. In both the one factor and two factor analysis, the 18 year olds were significantly less experienced than the students age 21-22. The age that the students' began to date is also inversely related to their sexual experience. There was a significant difference between the sexual experience of those that began dating in secondary school as opposed to those that began to date after age 17. Eleven students indicated that they did not

date and their mean sexual activity rating (SAR) was 1.27 which was not significantly different from the 17 or older group. Those that were more impulsive, disregarded their friends' input, had a poor relationship with their mother, did not avoid trouble, participated in high school team sports and did not attend weekly religious services rated significantly higher on the Sexual Activity Rating Scale. As for alcohol consumption, those that that did not drink were significantly different from those that drank alcohol weekly but not significantly different from those that drank nearly daily in the one factor analysis. However, in the two factor analysis, there was a significant difference between the non drinkers and the drinkers, frequency was irrelevant. Lastly, those that talked to their parent(s) a great deal about sex ($\underline{M}$ =2.66) had significantly higher sexual experience that those that did talk to their parents "a bit" ($\underline{M}$ =2.19) or not at all ($\underline{M}$ =2.21).

Sexual Beliefs/Attitudes

The following is the results of Sexual Beliefs/Attitudes as the independent variable in the one-factor analysis and the main effects in the two-factor (sexual beliefs/attitudes X identity status) ANOVAs.

One-Factor ANOVAs. The significant mean differences in sexual experiences (SAR) based on their sexual beliefs and attitudes as the independent variables is summarized in Table 1-2.

Table 1-2

One-Factor Significant Mean Differences of Sexual Experience: Sexual Beliefs/Attitudes

Ques	Sexual Attitude/Belief	Agree		Disagree	
		M	SD	M	SD
III1	Having sex before marriage is okay if both people agree to it. ($F(1, 142) = 24.732$ $p < .001$)	2.46	0.96	1.32	0.67
III4	The possibility of me catching AIDS is something I've never really thought about. ($F(1, 142) = 3.899$ $p < .05$)	2.03	1.09	2.40	0.96
III13	The majority of my friends have had sex ($F(1, 140) = 8.573$ $p < .01$)	2.42	0.99	1.84	0.97
III19	My parent(s) think it is okay for me to have sex as long as I use protection. ($F(1, 140) = 5.339$ $p < .05$)	2.51	0.95	2.12	1.03
III20	Having sex before marriage is okay as long as the couple is close, even if they don't plan to marry ($F(1, 142) = 15.102$ $p < .001$)	2.46	0.94	1.70	1.02
III23	It is against my values for me to have sex while I am unmarried. ($F(1, 142) = 21.327$ $p < .001$)	1.73	0.98	2.53	0.93
III24	As a virgin, I just wanted to (or still want to) "get it over with" ($F(1, 138) = 4.036$ $p < .05$)	1.97	1.00	2.37	0.99

Two-Factor ANOVAs. The significant main effects in the two-factor analysis are listed in Table 1-3. As with all the two-factor analyses, the identity

status main effects were significant and post-hoc mean differences were identical to the one-factor identity ANOVA.

Table 1-3

Two-Factor Significant Mean Differences of Sexual Experience: Sexual Beliefs/Attitudes as Main Effects

Ques	Sexual Attitude/Belief	Agree		Disagree	
		M	SD	M	SD
III20	Having sex before marriage is okay as long as the couple is close, even if they don't plan to marry ($F(1, 112) = 3.974$ $p < .05$)	2.51	0.96	1.72	1.06
III24	As a virgin, I just wanted to (or still want to) "get it over with" ($F(1, 107) = 3.903$ $p < .05$)	2.00	1.02	2.41	1.02

Post-hoc Analysis. Not surprising, the students who believe in pre-marital sex (questions III1, III20, III23) have significantly higher sexual activity than those that do not believe in pre-marital sex. Outside influences also seem to play a factor in sexual activity. Those late adolescents that believe that their friends have had sex (III13) and that their parents approve of their sexual activity (III19) have significantly higher sexual activity ratings. The threat of AIDS (III4) seems to be more of a concern for those with higher sexual activity. Lastly, those that perceived virginity as a stigma (III24), had a significantly lower level of sexual experience.

Interactions

There were no significant interactions found in the two-factor (background variables X identity status) ANOVAs. From the 2 (sexual attitudes/beliefs) x 4 (identity status) two-factor analysis, two significant interactions were found: responsibility of birth control[4] ($F(1, 113) = 3.356$ $p < .10$) and attitude toward pre-marital sex[5] ($F(1, 113) = 3.908$ $p < .10$). Upon further post-hoc analysis, no significant mean differences were found for the responsibility of birth control/ego identity status analysis at the .05 level. There were two significant post-hoc mean differences on attitude toward pre-marital sex by identity status. It again confirms the relationship between disapproval of pre-marital sex (belief/attitude) and lower sexual activity (behaviour). The foreclosed late adolescents that disagreed with premarital sex had significantly lower sexual experience ($M = 1.38$) than the achievement group that believed in premarital sex ($M = 2.72$; $t(67) = 3.872$, $p < 0.05$). Secondly, the achieved students that did not believe in premarital sex had significantly lower sexual activity ($M = 1.25$) than the adolescents that believed in premarital sex in the diffusion group ($M = 2.42$; ($t(31) = 3.117$, $p < 0.05$). As noted above, the premarital sex variable was also a main effect in both the one-factor and two-factor ANOVA analysis.

Discussion

The clearest relationship between ego identity and sexual experiences is the significantly lower sexual activity of the foreclosed adolescent. According to Marcia's and Adam's theories, these adolescents seem to have chosen at a young age to adhere to a external belief system, be it religious, familial or community, without questioning these values. Abstinence is often part of these belief systems where pre-marital sex is perceived as a unhealthy and perhaps even immoral part of adolescent development. This foreclosure is reflected in their sexual belief system and adherence to more traditional ideology such as attitudes toward pre-marital sex and weekly religious service attendance (see Table 1-4).

Table 1-4

Frequency of Belief by Identity Statement: 2 X 4 Chi Square Analysis

	Percentage of Students in each Identity Status				
Belief/Behavior	Diffusion	Foreclosure	Moratorium	Achievement	sig
Against values to have Premarital Sex	4.2	69.2	7.1	31.9	χ^2 (3, N = 120) = 21.484, p < .001
Attend religious services weekly	5.0	53.8	7.7	39.7	χ^2 (3, N = 104) = 14.885, p < .01
Pre-marital sex	100.0	38.5	100.0	88.4	χ^2 (3, N = 120) = 32.169, p < .001

The foreclosed adolescents' sexual experiences were significantly different from those adolescent's ego identity in Diffusion and Achievement.

While both are significantly higher, it cannot then be assumed that these adolescents are alike in decision making in this area. Diffused adolescents are characterized as having lack of commitments to ideology and further, have not even begun to search. They may be seen as living in the present, are vulnerable to self-esteem manipulation and may have problems under stressful situations (Marcia & Friedman, 1970). Identity Achieved adolescents have, according to the theory and corresponding scale, questioned their values and beliefs and have formed a clear sense of self based on a commitment to an ideology and/or role. These beliefs provide the structure when a conflict arises, helping guide the adolescent to make choices that will help to fulfill their future goals and attain the role that they see as "self". As such, one would think that even though Diffused and Achieved late adolescents may have equally high sexual experience, the Achieved adolescents would make more responsible decisions within that experience. For example, when comparing contraception practices at first and last intercourse, 13% of Achieved adolescents did not use any contraception during first intercourse as opposed to 22.2% of Diffused adolescents. During the most recent sexual encounter, a higher percentage of Achieved adolescents (88.9%) reported using contraception than the Diffused adolescents (83.3%). Hernandez and Diclemente (1992) also found higher

cumulative ego identity scores among those that did not engage in unprotected sex.

Clearly, it is difficult to predict the behaviours of those students who scored as being in the Moratorium stage. These adolescents are in Erikson's "crisis" stage, involving fear of the future, role experimentation and a general struggle to affix an ideological and interpersonal sense of self. The mean sexual experience of the Moratorium late adolescents was not significantly different than any of the three ego identity status and given the active exploration, the moratorium youth may choose many different interpersonal relationships and sexual patterns or ideology before committing to a ego identity.

Lastly, few interactions were found between the ego identity and the background variables on level of sexual experience. As main effects, some trends were apparent in the data.

Interpersonal relationships significantly influenced the participants sexual behaviour. Those that believed their friends had had sex or that their parents approve of their sexual activity, had significantly higher levels of sexual activity. Also, those that had a positive relationship with their mother or had examined friends' opinions had significantly lower levels of sexual activity. Even having participated in high school sports was a discriminating factor. Thus, depending on the type of interpersonal relationship, sexual attitudes and

behaviours were affected. Past research has shown conflicting findings. Benda and DiBlasio (1994) found that peer associations accounted for most of the respective variances in their model. However, there was some evidence that family/parental relationships influence the peer associations which in turn, influence their patterns of sexual behaviours and attitudes. "The quality of the parent-child relationship creates the emotional context that contributes to the relative strength of peer group influences" (Whitbeck, Conger, & Kao, 1993, p. 274). One must also consider the role of social modeling as influences. Whitebeck, Simons and Kao (1994) found that divorced mothers dating behaviour influenced the sexual behaviour and attitudes of both their sons and daughters. All these interpersonal connections suggest a need to further explore these social contexts

Late adolescents that partook in non-sexual risk-taking behaviours also had higher rates of sexual activity. The link between alcohol, early dating, impulsivity and delinquency and sexual activity have3 been well documented as predictors (Capaldi, Crosby, & Stoolmiller, 1996; Cooper, & Orcutt, 1997; Harvey & Spigner, 1995; Langer, & Tubman, 1997). However, from these data we can differentiate between lower levels of sexual activity from high levels of sexual activity, not just virgins from non-virgins. For example, when looking at the use of contraception, those that did not use any birth control, including

"withdrawal", had significantly higher sexual activity ratings than those that used birth control ($F(1, 99) = 3.288$ $p < .10$).

It was found that those students that talked frequently to their parents about sex had higher rates of sexual activity. This in indeed, counter to most literature that suggests that open communication at appropriate developmental levels is not related to or inversely related to sexual activity (Newcomer & Udry, 1983; Jensen, de Gaston, & Weed, 1994). Upon further analysis of those that spoke to their parents "a great deal", there was a significant difference between those that discussed sex before or after the adolescents' initial sexual experiences ($F(1, 45) = 9.349$ $p < .01$). The students that spoke to their parents about sex BEFORE becoming sexually active had a significantly lower sexual activity rating ($M = 2.51$), than those that talked to their parents a great deal AFTER having had sex ($M = 3.67$). Thus, when analyzed together, the "great deal" students were different from the students who spoke to their parent "a bit" or "not at all".

Implications

In this paper, an exploration of the link between ego identity and adolescent sexual activity in late adolescents was presented. The next step would be broaden the sample to see whether similar patterns hold for early and middle adolescents in order to help explain their decision-making and plan for

early interventions. In doing so, it seems that one needs to consider the associated socio-emotional states that are generally found within each ego identity status' that may also influence their sexual choices. Meeus (1996) in his meta-study on identity development in adolescence, found that "moratoriums are the least happy and most depressed, the high commitment status' are the happiest and least depressed, and diffusion occupies a position between moratorium and the high commitment status'" (p. 594). Further, he found that "the difference in psychological well-being between high and low status's becomes correspondingly greater as the young people become older" (p. 594). Thus contrary to popular belief, late adolescents in the moratorium state may be undergoing more stress in their decision-making than early adolescents. Knowing this, should we be more concerned about a Diffused 13 year old or a Diffused 19 year old? These findings in a larger context need to be explored further.

Conclusion

Currently, some identity theorists are now moving from psychodynamic to social/cognitive realms in exploring identity. The alternative perspectives on identity research such as Kerpelman, Pittman, and Lamke's (1997) process-oriented control theory try to explain the processes that underlie identity formation. Nonetheless, there still seems to be much to learn from the ego

identity status theories. Erikson's ego identity theory is future-orientated, involving the interplay of social roles, ALL social roles, with inner continuity. That is, our ego identity and interpersonal relationships, be it in the form of love or sex, influence each other. Thus, knowing the patterns of sexual experience in relation to ego identity status both reinforce the status's themselves, as theorized, and provide some predictive power of behaviour and attitudes.

Endnotes

[1]205 students participated: 59 students were not included because (a) they did not meet the sample age criteria, (b) they were sexually active involuntarily (rape, incest) or (c) their data was incomplete

[2] See Appendix C, Sections I, III, V & VII for variables

[3] Range of SAR is 1 to 4

[4] Question III 18 - If a girl gets pregnant, it is completely her fault.

[5] Question III1 - Having sex before marriage is okay only if both people agree to it

References

Adams, G.R., Bennion, M., & Huh, C. (1989). Objective Measure of Ego Identity Status: A Reference Manual. Guelph, Ontario: University of Guelph.

Benda, B.B., & DiBlasio, F.A. (1994). An integration of theory: Adolescent sexual contacts. Journal of Youth and Adolescence, 23, 403-420.

Bilsker, D., & Marcia, J.E. (1991). Adaptive regression and ego identity. Journal of Adolescence, 14, 75-84.

Capaldi, D. M., Crosby, L., & Stoolmiller, M. (1996). Predicting the timing of first sexual intercourse for at-risk adolescent males. Child Development, 67, 344-359.

Cooper, M., & Orcutt, H. K. (1997). Drinking and sexual experience on first dates among adolescents. Journal of Abnormal Psychology, 106, 191-202.

Eliason, M.J. (1995). Accounts of sexual identity formation in heterosexual students. Sex Roles: A Journal of Research, 32, 821-834.

Edwards, A.J. (1996). Identity achievement and adolescent sexual behavior. Unpublished research report. Edmonton, AB: Author.

Erikson, E.H. (1956). The problem of ego identity. Journal of the American Psychoanalytic Association, 4, 56-121.

Erikson, E.H. (1959). Late adolescence. In D.H. Funkenstein (Ed.), The Student and Mental Health. Cambridge, MA: Riverside Press.

Erikson, E.H. (1968). Identity: Youth and crisis. New York, NY: Norton.

Fehlauer, E. (1992). Attitudes, influences and expectations of adolescent dating behaviors: A survey of high school students. Unpublished Masters Thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Flum, H. (1994). Styles of identity formation in early and middle adolescence. Genetic, Social & General Psychology Monographs, 120, 435-468.

Harvey, S.M., & Spigner, C. (1995). Factors associated with sexual behavior among adolescents: A multivariate analysis. Adolescence, 30, 253-264.

Hernandez, J.T., & Diclemente, R.J. (1992). Self-control and ego identity developmental predictors of unprotected sex in late adolescent males. Journal of Adolescence, 15, 437-447.

Hess, G C., & Schnirer, L.A.J. (1998). Research concerns in obtaining valid survey data about adolescents' sexual behaviours. In J. J. Borras-Valls & M. Perez-Conchillo, (Eds.), Sexuality and Human Rights (pp. 303-306). Valencia, Spain: Instituto de Sexologia y Psicoterapia Espill.

Jensen, L.C., de Gaston, J.F. & Weed, S.E. (1994). Societal and parental influences on adolescent sexual behavior. Psychological Reports, 75, 928-930.

Langer, L.M., & Tubman, J.G. (1997). Risky sexual behavior among substance-abusing adolescents: Psychosocial and contextual factors. American Journal of Orthopsychiatry, 67(2), 315-322.

Marcia, J. (1966). Development and validation of ego-identity status. Journal of Personality and Social Psychology, 3, 551- 558.

Marcia, J.E., & Friedman, M.L. (1970). Ego identity status in college women. Journal of Personality, 38, 249-263.

Meeus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. Journal of Youth and Adolescence, 25, 569-598.

Mitchell, J.J. (1992). Adolescent struggle for selfhood and identity. Calgary, AB: Detselig Enterprises Ltd.

Metzler, C.W., Noell, J., Biglan, A., & Ary, D. (1994). The social context for risky sexual behavior among adolescents. Journal of Behavioral Medicine, 17, 419-438.

Newcomer, S.F., & Udry, J.R. (1983). Adolescent sexual behavior and popularity. Adolescence, 18, 515-522.

Orlofsky, J.L., Marcia, J.E., & Lesser, I.M. (1973). Ego identity status and the intimacy versus isolation crisis of young adulthood. Journal of Personality and Social Psychology, 27, 211-219.

Rawlings, D., Boldero, J., & Wiseman, F. (1995). The interaction of age with impulsiveness and venturesomeness in the prediction of adolescent sexual behaviour. Personality & Individual Differences, 19, 117-120.

Schnirer, L. (1996). Adolescent sexuality in rural Alberta. Unpublished master's thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Tubman, J. G, Windle, M., & Windle, R. C. (1996). Cumulative sexual intercourse patterns among middle adolescents: Problem behavior precursors and concurrent health risk behaviors. Journal of Adolescent Health, 18, 182-191.

Whibeck, L.B., Conger, R.D., & Kao, M.Y. (1993). The influence of parental support, depressed affect, and peers on the sexual behaviors of adolescent girls. Journal of Family Issues, 14, 261-278.

Whitbeck, L.B., Simons, R.L., & Kao, M.Y. (1994). The effects of divorced mothers' dating behaviors and sexual attitudes on the sexual attitudes and behaviors of their adolescent children. Journal of Marriage and the Family, 56, 615-621.

Adolescent Sexuality in a Developmental Context: Egocentrism

Introduction

The concern over adolescent sexual behaviors and the management of accompanying problems has been an on-going pursuit for those in the health and education fields for many decades. It is generally agreed that across North America, approximately 50 to 60% of adolescents will be sexually active by the time they finish high school (Alan Guttmacher Institute, (AGI) 1999; "The health of Canada's children", 1994; Fehlauer, 1992). While the pregnancy and birth rates have seemed to decline in recent years (AGI, 1999) there are a million adolescent pregnancies in the United States each year and the teenage pregnancy rate in Canada is 4.1% (Report on the Health of Canadians, 1996). Further, there is evidence that sexually transmitted diseases (STDs) in the adolescent population are cause for concern: gonorrhea rates for young Canadians are three to four times higher than the overall national average and chlamydia rates for young women are as high as 5 to 10% (Patrick, 1997).

Despite a range of contraception available and a great amount of support for sex education in Canadian schools (McKay & Holowaty, 1997; McKay, Pietrusiak & Holowaty, 1998; Verby & Herold, 1992), irresponsible adolescent sexual decision-making is still impacting the physical, emotional and economic well-being of millions of adolescents and their families. It seems clear to this researcher that one cannot

approach this problem in the same ways as one approaches attempting to change the sexual behaviours of adults. Indeed, part of the problem itself is the special considerations that are due to the nature of this population. Adolescents may be partaking in "adult-like" behaviors yet they are in a stage fraught with major, specific, transitional tasks that may impede or confuse these sexual decisions. Such developmental matters include puberty, identity exploration and commitments, and cognitive changes and gains. These cognitive changes, usually described in Piaget's cognitive-developmental theory as the Formal Operational stage, provide new resources in the form of abstract, future-orientated thinking. However this meta-cognition and social cognition, while usually seen as positive, progressive development, may provide problems in relation to adults since adolescents lack experience.

Elkind (1967) speaks of adolescent egocentrism as a heightened awareness of one's inner thoughts and abstractions as a result of formal operations. Consequently, adolescents make the mistake in believing that others' are equally as attentive to their thoughts, feelings and attitudes as they themselves are. Elkind defined this type of egocentrism as the "imaginary audience," when adolescents become sensitive to falsely perceived scrutiny by becoming more self-conscious and concerned with physical appearance. They also tend to ruminate over each action and detail in their life.

The second type of egocentrism described by Elkind is the concept of "personal fable". This type of egocentrism is also a result of erroneous thinking: when

adolescents find their own thoughts as profound, they conclude they must be novel and original. Hence, there is an overdifferentiation of the self from others (Elkind, 1967) which leaves the adolescent with magnified feelings of personal uniqueness and a perception of invulnerability. Adolescents who have strong personal fable ideology believe that rules that apply to others do not apply to them because they are special.

The developmental concept of personal fable may be of particular use in the investigation of adolescent sexuality. The sense that nobody understands one's current situation ("You don't understand what I'm going through!") leads to feelings of alienation and uniqueness that may increase risk-taking behaviour and a belief in invulnerability ("It can't happen to me"). Elkind (1984) comments on the disillusionment of adolescents in romantic situations when they discover that their thoughts, feelings and attitudes are not shared by others. In a qualitative investigation, Pete and DeSantis (1990) conclude that the initiation of early sexual activity was in part due to the adolescents' belief that they would not get pregnant. Mitchell (1992) states that personal fable egocentrism is a key concept when investigating teen-age pregnancy:

> .... almost all pregnant teens report being "surprised" or "shocked" at finding themselves pregnant. When asked why they thought they would avoid pregnancy a stunning range of fables and fictions emerge. For example:
>
> a) the belief that they did not have sex often enough to become pregnant;

b) the belief that they did not experience an orgasm, therefore, could not conceive;
c) the belief that they were "too young" to become pregnant;
d) the belief that they would not be "caught" during high risk days (even when they understood the ovulation cycle);
e) "forgetting" to use birth control; and,
f) the belief that it just couldn't happen to "me". (p.44)

Holmbeck, Crossman, Wandrei and Gasiewski (1994) found that, in general, adolescents with lower levels of egocentrism had more contraceptive knowledge and more positive attitudes toward the use of contraception. Lastly, Saltz and Perry (1994) hypothesized that the personal fable concerning pregnancy was instrumental in the 40% pregnancy rate in the schools that were sampled. Their experiment consisted of an intervention: having a randomly assigned group of students role-play the consequences of pregnancy. They found that "compared to a control group, both role-playing the consequences of teen pregnancy, and watching videos of friends role-playing, significantly increased the favorable attitude toward abstinence in girls but not boys. However, these interventions did not affect attitudes toward contraceptive use" (p. 223).

The intent of this research was to explore the link between adolescent sexuality and personal fable ideology. Can feelings of invulnerability, omnipotence and personal uniqueness, Lapsley's three attributes of personal fable, predict sexual experience in late adolescents? It has been generally thought that adolescent egocentrism increases during early adolescent, peaks during middle adolescent (14 to 16 years) and decreases

during later adolescence (Elkind & Bowen, 1979). However, current research has not supported this theory. Peterson and Roscoe (1991) found egocentrism in female college freshmen higher than usually found in high school students. Rycek, Stuhr, McDermott, Benker and Swartz (1998) included males and found similar results. In summary, while adolescent egocentrism is usually thought of as an early or middle adolescence phenomenon (based on cognitive developmental theory), there is evidence that it will become evident whenever the adolescent or adult enters a stage of social cognitive development (Lapsley, 1990) thus it seemed appropriate to test the relationship between personal fable ideology and sexual experience with a college-aged sample.

Method

Sample

The sample consists of 146 late adolescent undergraduate students from a large Canadian university. Two hundred and five students participated: Fifty-nine students were not included because (a) they did not meet the sample age criteria, (b) they were sexually active involuntarily (rape, incest) or (c) their data was incomplete. The students were from the Faculties of Education, Arts and Science and were taking an undergraduate course that covered developmental issues, including adolescent sexuality. The majority were in the second year of their program (72.6%) although the range included first to fourth year students. Late adolescents are defined in this study as students working on their first degrees, up to age 22.

Instrument

Data were gathered using a comprehensive questionnaire, versions of which have been used in two previous studies (Fehlauer, 1992; Schnirer, 1996). Data collected include demographic and background information consisting of gender, living arrangement, perceived peer and family relationships, sexual attitudes, sexual behaviors and other pertinent health or associated activities (e.g., drug/alcohol usage). The constructs of invulnerability, omnipotence and personal uniqueness in adolescent egocentrism are measured in Section II using The New Personal Fable Scale (Lapsley, 1988). It consists of 46 items on a Likert Scale and provides levels of reliability ranging from .70 to .92, based on findings reported by Lapsley.

Analysis

When investigating adolescent sexuality, one must decide how best to quantify sexual activity. Much research in this area use a categorical variable: those that are sexually active, defined usually as having had sexual intercourse once, versus those that are not sexually active, i.e., never having sexual intercourse. It is this researcher's belief that it is somewhat misleading to group adolescents that have had sex once in the same category as adolescents who have much sexual experience, for many years, with different partners. To address this problem, a Sexual Activity Rating (SAR) Scale (Hess & Schnirer, 1998) was devised based on answers to four questions: age of first intercourse, number of partners, frequency of sexual activity

and whether they have, or currently were, pregnant (For males, it was asked if their partner had ever been pregnant). Each student was assigned a rating of 0 to 3 for each question with a total Sexual Activity Rating (SAR) range between 0 (virgins) to 13 (high sexual experience). To note, high sexual experience does not automatically mean irresponsible sexual activity although it certainly implies it as over and over, researchers have found that younger sexually active adolescents are less likely to use contraception consistently or reliably.

The main multiple regression model under investigation was as follows:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4$$

where Y = SAR

X_1 = invulnerability subscale

X_2 = omnipotence subscale

X_3 = personal uniqueness subscale

X_4 = outside variable

The SAR was used as the dependent variable in all the linear regression models. The Personal Fable scale (total) as well as the 3 subscales (invulnerability, omnipotence and personal uniqueness) were used as the predicators. With an unequal number of questions in each subscale, subscale mean scores were used for scale comparisons. After the initial personal fable regression equations were run, an outside variable was added to the equation one at a time. These outside variables were chosen based on

their hypothesized relevance to personal fable ideology; as they contain egocentrism or lack of it in a general sense and within a sexual context (see Table 2-1).

Table 2-1

Outside Variables: General and Sexual

	General Variables	M	SD
I1	age	19.94	1.06
I8	high school marks	80.83	6.844
I14d	Before I do something, I try to consider how my friends will react to it	4.04	1.39
I14f	I try to keep out of trouble no matter what	4.55	1.08
I14g	I often act on the spur of the moment, without stopping to think	3.02	1.37
I14i	Before I do something, I try to consider how my parent(s) will react to it	4.25	1.21
	Sexual Attitudes		
III4	The possibility of me catching AIDS is something I've never really thought about	2.31	1.53
III6	Having sex would make me feel sort of important	2.15	1.43
III7	It is okay to tell someone I love them to get them to have sex with me	1.11	0.33
III17	None of my friends are the kind of people who would be AIDS carriers, it's just not an issue with me	2.47	1.49
III18	If a girl gets pregnant, it is completely her fault	1.30	0.76
V22a	communication with parents about sexual issues	1.84	0.71

Results

The following descriptive statistics were the basis for the Sexual Activity Rating (SAR) Scale in Table 2-2. Of the 146 students, 103 (70.5%) have had sexual intercourse at least once. There was no significant gender variability: χ^2 (1, N = 146) = .654, p > .05. The majority of subjects' (60.0%) age of first sexual intercourse was

Table 2-2

Sexual Activity Rating of Students By Gender

Sexual Activity Rating (SAR)	Males (N=28) (%)	Females (N= 116) (%)	Total (%)	Cumulative Frequency
0 (virgin)	35.7	28.4	29.9	29.9
3	10.7	2.6	4.2	34.0
4	0	4.3	3.5	37.5
5	21.4	9.5	11.8	49.3
6	14.3	16.4	16.0	65.3
7	3.6	15.5	13.2	78.5
8	10.7	12.1	11.8	90.3
9	3.6	5.2	4.9	95.1
10	0	3.4	2.8	97.9
11	0	0.9	0.7	98.6
12	0	0.9	0.7	99.3
13	0	0.9	0.7	100.00

Note. N= 144 students

17 or over. The students reported the following number of sexual partners: 1 partner, 41.7%; 2 partners, 24.3%; 3-4 partners, 14.6% and 5 or more partners, 18.4%. Seven students reported have had sexual intercourse only once (6.8%). Twenty-two percent have sex monthly or less. Approximately 37% have sex weekly and 33% have sex more than once a week. Nine females had been, or were currently pregnant. None of the males reported that their partner's had been or were currently pregnant. The sexual activity range was between 0 (virgins) to 13 (highest sexual activity rating). There were no significant gender differences ($F(1, 142) = 2.771$ $p > .05$).

The following is a summary of the mean personal fable subscales (see Table 2-3).

Table 2-3

Personal Fable Constructs By Gender

	Males		Females		Total	
	M	SD	M	SD	M	SD
Omnipotence	3.00	0.46	3.11	0.46	3.09	0.46
Invulnerability	3.05	0.41	2.66	0.47	2.74	0.48
Personal Uniqueness	3.27	0.48	3.37	0.42	3.35	0.44
Total Personal Fable	3.10	0.31	3.05	0.33	3.06	0.32

Note. Sample size fluctuated in each subscale: Males, 26-28; Females, 114-118; Total, 140-146

Overall, males had higher personal fable ideology than females; however it was not statistically significant ($F(1, 138) = 0.651$ $p > .05$). For both males and females, the

Personal Uniqueness subscale was the highest. The only significant gender difference was on the subscale of Invulnerability ($F(1, 144) = 16.650$ $p < .05$). Given the smaller sample of males and that there seems to be very little gender variability, the decision was made to run the regression analysis on the total sample.

The Pearson's correlation coefficents between the SAR and each personal fable construct individually is as follows: Total, $r(137) = .077$, $p > .05$; Personal Uniqueness, $r(141) = -.149$, $p > .05$; Invulnerability, $r(143) = .026$, $p > .05$; and Omnipotence, $r(139) = .192$, $p < .05$ indicating a significant, positive relationship between sexual activity and feelings of Omnipotence.

All the regression equations were significant at the .05 probability level with the best predictor equation involving the 3 subscales and age which accounted for almost 20% of the variance. However, upon further analysis, only two coefficents contributed significantly to the variance: the Omnipotence subscale and the outside variable. Personal Uniqueness and Invulnerability did not account for any additional variance in the SAR. Generally, there was a significant negative correlation between the consideration of friends ($r = -.236$, $p < .01$), parents ($r = -.141$, $p < .05$), or authority ($r = -.202$, $p < .01$) and sexual experience. Impulsivity (I14g) was not significantly correlated ($r = .052$, $p > .05$) with SAR. In regard to sexual attitude outside variables, the strongest prediction equation accounted for 14.8 % of the variance and two questions (III4, III17) exhibited a significant negative relationship ($r = -.247$, $p < .05$; r

= -.304, $p < .05$) between the belief that AIDS was relevant to them and the SAR. One might expect that those with elevated egocentric attitudes "AIDS won't happen to me" would be positively related to high sexual activity as their personal fables would insulate them from worrying about diseases or pregnancy and thus, taking the necessary precautions. However, because there are no causal implications, it is just as likely that those not sexually active do not worry about AIDS. Other indicators of sexual self-centeredness (III7, III18) did not contribute significantly to the accounted variance. Omnipotence was a significant coefficient in every regression equation.

Discussion

From this study it can be concluded that, on average, ten percent of the variance in sexual activity among undergraduates can be attributed to Personal Fable constructs. Further, it was not personal fable ideology as a whole construct but the subscale Omnipotence and outside variables that were the significant predictors. As feelings of omnipotence increased, so did their sexual experience. In general, there was a negative relationship between the influence of outside perspectives and sexual activity.

The foundations of these theoretical constructs are still incomplete as researchers from two ideological camps try to integrate new findings. In the cognitive developmental theory (Elkind & Bowen, 1979; Hudson & Gray, 1986) as an adolescent enters formal operations, egocentrism is a by-product. In the social-cognitive explanation; egocentrism is due to new perspective-taking and interpersonal skills

(Jahnke & Blanchard-Field, 1993; Lapsley & Murphy, 1985). Based on the cognitive developmental theory, we should find that adolescents who score high on adolescent egocentric measures have impaired judgment in making wise decisions in potentially risky situations. This explanation was not supported by my findings as the expectant increase in invulnerability and personal uniqueness was not related to sexual experience. There is some evidence to support the perspective taking theory as the more they considered their friends', parents' or authorities' views, the lower the sexual activity.

Lapsley, Flannery, Gottschlich and Raney (1996) suggest that personal fable ideation is not unilateral nor entirely negative. He found that the strongest predictor in positive adjustment was Omnipotence while high rates of Personal Uniqueness were significantly related to depression and suicidal ideation. Both depression and suicidal tendencies increased with age. They conclude that: "The illusion of omnipotence protects and contributes to resilience and coping, the illusions of invulnerability and personal uniqueness do not." (p.4). Thus, the relationship between omnipotence and sexual experience could suggest autonomy and feelings of self-assuredness that are reflected in their interpersonal relationships including their sexual ones. One can debate that this "positive illusion", while fostering independence and experimentation, may have negative consequences in the form of sexual risk taking.

Despite the evidence above, we cannot rule out the role of feelings of invulnerability and personal uniqueness as unrelated to sexual activity or risk-taking

behavior. Arnett (1992) found evidence that sexual risk-taking and broader delinquency was connected to personal fable ideology. Adolescent egocentrism, being a complex and multi-faceted concept, is difficult to measure. Therefore, a lack of empirical evidence may be more due to psychometric problems (Holmbeck et al., 1994) and the nature of the population (Hudson & Gray, 1986). Buis and Thompson (1989) summarize these problems: "... young persons may, for instance, *act* as if they feel invulnerable (affective awareness of consequences absent) yet *score* low on invulnerability (cognitive awareness of consequences present)." Given the cognitive and social cognitive changes during adolescent development, this gap is not surprising and suggests more research is warranted.

From this research there seems to be a link between egocentrism and sexual activity that needs to be further explored. Is personal fable ideology a negative attribute, increasing the likelihood of risk-taking or an adaptive and protective attribute, that encourages independence and autonomy? The imaginary audience, as part of the egocentrism construct, should be included as well as a wider adolescent sample as the developmental pattern in egocentrism remains uncertain (Holmbeck et al., 1994; Riley, Adams, and Nielsen, 1984).

References

The Alan Guttmacher Institute (AGI). (1999). Teen sex and pregnancy: Revised 09/99. Facts in Brief. Retrieved from the Web 12/16/99. http://www.agi-usa.org/pubs/fb_teen_sex.html

The Alan Guttmacher Institute (AGI). (1999). Why is teenage pregnancy declining? The roles of abstinence, sexual activity and contraceptive use: 12/99. Occasional Report. Retrieved from the Web 02/07/00. http://www.agi-usa.org/pubs/or_teen_preg_decline.html

Arnett, J. (1992). Reckless behavior in adolescence: A developmental perspective. Developmental Review, 12, 339-373.

Buis, J.M., & Thompson, D.N. (1989). Imaginary audience and personal fable A brief review. Adolescence, 24, 773-781.

Elkind, D. (1984). All grown up & no place to go: Teenagers in crisis. Reading, MA: Addison Wesley.

Elkind, D. (1967). Egocentrism in adolescence. Child Development, 38, 1025-1034.

Elkind, D., & Bowen, R. (1979). Imaginary audience behavior in children and adolescents. Developmental Psychology, 15, 38-44.

Fehlauer, E. (1992). Attitudes, influences and expectations of adolescent dating behaviors: A survey of high school students. Unpublished Masters Thesis,

Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Hess, G. C., & Schnirer, L. A. J. (1998). Research concerns in obtaining valid survey data about adolescents' sexual behaviours. In J. J. Borras-Valls & M. Perez-Conchillo, (Eds.), Sexuality and Human Rights (pp. 303-306). Valencia, Spain: Instituto de Sexologia y Psicoterapia Espill.

Holmbeck, G.N., Crossman, R.E., Wandrei, M.L., & Gasiewski, E. (1994). Cognitive development, egocentrism, self-esteem, an adolescent contraceptive knowledge, attitudes, and behavior. Journal of Youth and Adolescence, 23, 169-193.

Hudson, L.M., & Gray, W.M. (1986). Formal operations, the imaginary audience, and the personal fable. Adolescence, 21, 751-765.

Jahnke, H.C., & Blanchard-Fields, F. (1993). A test of two models of adolescent egocentrism. Journal of Youth and Adolescence, 22, 313-326.

Lapsley, D.K. (1988). New Personal Fable Scale. Unpublished inventory, used by permission of the author.

Lapsley, D.K. (1990). Continuity and discontinuity in adolescent social cognitive development. In R. Montemayor, G.R. Adams, & T.P. Gullotta (Eds.), From childhood to adolescence: A transitional period? Newbury Park, CA: Sage.

Lapsley, D.K., Flannery, D.J., Gottschlich, H., & Raney, M. (1996, March). Sources of Risk and Resilience in Adolescent Mental Health. Poster presentation, Sixth Biennial Meeting of the Society for Research on Adolescence, March 9, 1996, Boston.

Lapsley, D.K., & Murphy, M.N. (1985). Another look at the theoretical assumptions of adolescent egocentrism. Developmental Review, 5, 227-236.

McKay, A., & Holowaty, P. (1997). Sexual health education: A study of adolescents' opinions, self-perceived needs, and current preferred sources of information. Canadian Journal of Human Sexuality, 6, 29-38.

McKay, A., Pietrusiak, M.A., & Holowaty, P. (1998). Parents' opinions and attitudes towards sexuality education in the schools. Canadian Journal of Human Sexuality, 7, 139-146.

Mitchell, J. J. (1992). Adolescent struggle for selfhood and identity. Calgary, AB: Detselig.

Patrick, D. M. (1997). The Control of Sexually Transmitted Diseases in Canada: A Cautiously Optimistic Overview. Canadian Journal of Human Sexuality, 6,

Pete, J.M., & DeSantis, L. (1990). Sexual decision making in young black adolescent females. Adolescence, 25, 144-154.

Peterson, K.L., & Roscoe, B. (1991). Imaginary audience behavior in older adolescent females. Adolescence, 26, 195-200.

Report on the Health of Canadians by the Federal, Provincial and Territorial Advisory Committee on Population Health: Meeting of Ministers of Health, Toronto, On, Sept. 10-11, 1996. Retrieved from the Web 01/29/00 . http://www.hc-sc.gc.ca/iacb-dgiac/nhrdp/healthofcanadians/app-d-e.htm

Riley, T., Adams, G.R., & Nielsen, E. (1984). Adolescent egocentrism: The association among imaginary audience behavior, cognitive development, and parental support and rejection. Journal of Youth and Adolescence, 13, 401-417.

Rycek, R.F., Stuhr, S.L., McDermott, J., Benker, J., & Swartz, M.D. (1998). Adolescent egocentrism and cognitive functioning during late adolescence. Adolescence, 33, 746-751.

Saltz, E., & Perry, A. (1994). Attacking the personal fable. Youth & Society, 26, 223-243.

Schnirer, L. (1996). Adolescent sexuality in rural Alberta. Unpublished master's thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

The Health of Canada's Children. (1994). A CICHA profile, 2nd Ed. Ottawa: Canadian Institute of Child Health.

Verby, C. & Herold, E. (1992). Parents and AIDS education. AIDS Education and Prevention, 4, 187-196.

A Comparison of Predictors of Late Adolescent Risk-Taking

Introduction

The complexity of human behaviour makes understanding how to encourage adolescents to decrease deviant or unhealthy choices in life difficult. Adolescents who seem to be similar in background and innate resources often make radically different choices and become remarkably dissimilar in consequence. From studies about resiliency, researchers are finding that pro-active, early intervention is needed to make any significant improvements in attitudes, cognitive skills and behaviours of "at-risk" children (Werner, 1999). Since irresponsible adolescent sexuality has many undesirable and possible fatal consequences, identifying and working with students who make poor sexual choices, a type of "at-risk" adolescent, is needed to decrease sexually transmitted diseases, teen pregnancies, and the associated costs of each. In order to plan such specific interventions, a myriad of questions must be addressed: How do you define a sexually "at risk" adolescent? how do you identify which students are "at-risk"? which variables best predict these risky behaviours? In this paper, it is my intent to compare variables and groups of variables to see which best predict the adolescents who are most at-risk for making poor sexual decisions.

The literature on the antecedents of sexual decision making encompasses several areas of study:

1. personality, temperament, psychological (e.g., low self-esteem, alienation)
2. biological (early puberty etc.)
3. cognition, motivation, and academic factors
4. social environment and interpersonal relationships (e.g., family, peer, community, and media)
5. sexual knowledge and attitudes
6. demographic, and
7. other risk-taking behaviours.

For each specific group, evidence seems to support or refute its relationship with sexual risk-taking. In this study, I will be focusing on the last four groups of variables. The first three areas; psychological, biological and cognitive have been extensively researched with few certain conclusions (see Gordon, 1996; Green, Johnson & Kaplan, 1992; Lagana & Luciana, 1999; Small & Luster, 1994 for review). In addition, often problematic in researching the first three categories is operationalizing and measuring internal concepts such as locus of control, stress or planning using reliable and valid instruments. In studying the last four variables, there seems to be better opportunities to obtain data that are more easily measureable and thus, cleaner, in which to make comparisons within and between similar research.

The relationship between the social predictors of parental or peer influence and sexual behaviour is nebulous:

> The nature of parents' influence on adolescents' sexual behaviors is even more uncertain than that of peers. Although it is generally assumed that the likelihood of initiation of coitus among adolescents is influenced by the quality of parent-child relationship, research supporting this assumption is surprisingly sparse and inconclusive (Whitbeck, Conger & Kao, 1993, p.262).

Some researchers have found a relationship between increased sexual risk-taking and loss of a parent early in the teen's life (Morgan, Chapar, & Fisher, 1995), permissive parental values and poor parental monitoring (Small & Luster, 1994; White & DeBlassie, 1992), lack of communication with partner (Faulkenberry, Vincent, James, & Johnson, 1987), and peer sexual activity (Flick, 1986). It seems that the most consistent predictors in this area are indications of family dysfunction or stress (see Ensign, Scherman, & Clark, 1998, for review) coupled with peer sexual decisions.

Researchers that study sexual knowledge and attitudes provide a variety of interesting findings. Lagana and Luciana (1999) argue in their meta-analysis of adolescent contraceptive literature that the lack of knowledge of contraceptives typically leads to nonuse or misuse of contraceptives and further, that those that are knowledgeable about contraceptives seem to be the ones who actually use them. Other researchers have found knowledge, positive attitudes and intention all to be poor predictors of safe sex behaviour (Crawford, Turtle & Kippax, 1990; Gordon, 1996; Rosenthal, Hall & Moore, 1992). However, misinformation and negative attitudes still abound despite educational programs: Erroneous beliefs about nonfertility, erroneous

beliefs and strong feelings about obtaining contraceptives, unplanned nature of intercourse, desiring or lack of caring about becoming pregnant, and negative affect toward contraception (Green et al., 1992). "The assumption that adolescents need only be informed about the dangers of certain sexual behaviours in order to avoid these practices is apparently unwarranted. For example, a number of studies have shown that knowledge about AIDS and safe sex practices does not predict condom use among adolescents" (Moore & Rosenthal, 1992, p. 416). One only has to examine anti-smoking education to understand that knowledge, attitude or intentions does not mean automatic nor complete behaviour change in adolescents.

There have been significant differences in pregnancy or STD rates found by using major demographic variables such as age (Richter, Valois, McKeown, & Vincent, 1993; Rosenthal, Biro, Succop, Bernstein & Stanberry, 1997), race/ethnicity (Biro, 1992; Gordon, 1996), religiosity (McLean & Flanigan, 1993; White & DeBlassie, 1992) and family status (Coker, Richter, Valois, McKeown, Garrison & Vincent, 1994; McLean & Flanigan, 1993). However, others have found no significant differences on any of the major demographic variables (Morgan et al., 1995).

Generally, other risk-taking behaviours, such as alcohol or drug use, delinquency and truancy have been found to be associated with high sexual risk-taking (Cooper, Peirce & Huselid, 1994; Harvey & Spigner, 1995; Rodgers & Rowe, 1990; White & DeBlassie, 1992). It has been suggested that an underlying tendency toward

sensation-seeking or impulsivity may explain this phenomenon (Harvey & Spigner, 1995) but regardless of their association, it seems these variables are strong predictors of sexual risk-taking.

While many of these studies have examined these factors in various disparate combinations, few have systematically grouped comparable variables in regression models to test which cluster of variables (groups) best predict sexual risk-taking. For this study, four groups were tested: Developmental (demographic), sexual attitudes, interpersonal, and other risk-taking. To note, Holden, Nelson, Velasquez and Ritchie (1993) estimate that there are over 25 variables that have been associated with early initiation of sexual intercourse and contraceptive use in adolescents and as many different variations of clusters, as grouping of variables is often difficult due to complex interconnections.

Method

Sample

Data were collected from 146 late adolescent undergraduate students[1] from a large Canadian university. The students were from the Faculties of Education, Arts and Science and were taking an undergraduate course where developmental issues, including adolescent sexuality were addressed. The majority were in the second year of their program (72.6%) although the range included 1st to 4th year students. "Late

adolescents" are defined by this study as any student working on his/her first degree, up to age 22.

Instrument

Quantitative data were gathered using a comprehensive questionnaire (See Appendix C: Instrument) that has been used in two previous studies (Fehlauer, 1992; Schnirer, 1996). Data collected include such things as demographics, living arrangement, perceived peer and family relationships, sexual attitudes, sexual behaviour s and other pertinent health or associated activities (e.g., drug/alcohol usage).

Analysis

In order to predict sexually risky behaviours, it was necessary to define what constitutes irresponsible or risky sexual activity. Most studies (Moore & Rosenthal, 1992; Poppen, 1994) look at safe sex practices that minimize the likelihood of conception/pregnancy and sexually transmitted disease. This usually is based on use of contraception. Focusing strictly on self-report of contraception use, though, is somewhat problematic: How does one gain a reliable gage of contraception practices? ask about use at first time? last time? "on average"? This also ignores the increased likelihood of putting oneself at risk in other ways such as having multiple partners and beginning sexual intercourse at a young age. To gain a better sense of a person's sexual experience and risk-taking, a sexual risk-taking rating (SRTR) scale was devised. Students were assigned a rating based on their answer to 8 questions: Number of

partners, age at first intercourse, frequency of intercourse, and whether or not one had been pregnant (or their partner had been pregnant, in the case of males), use of contraception at first intercourse, use of contraception at last intercourse, whether or not one had had a STD and whether the student had discussed contraception with their partner before engaging in sexual activity. Students were given a score from 0 to 3 on each of the dimensions and the combined score was their SRTR.

Eight questions were created for each of the four groups: Developmental, Interpersonal, Risk-Taking factors and Sexual Attitudes[2]. For this study the Developmental theme is defined as background and demographic variables *in the past* such as parents' occupation, high school marks and age that one began dating. The Interpersonal theme in an indication of relationships and communication with peers and family members. The Risk-Taking theme contains questions on conservatism, impulsivity and norm-breaking variables. Lastly, questions in the Sexual Attitudes theme were included on the basis of providing a range of late adolescents' current sexual belief system. The grouping and inclusion decisions were based on a review of the sexual risk- taking literature. These questions were entered into a multiple regression analysis with sexual risk-taking rating (SRTR) as the dependent variable. As the SRTR is the operationalized measure of sexual risk-taking, both terms will be used interchangeable from this point forth.

Results

The following descriptive statistics were the basis for the Sexual Risk-Taking Rating (SRTR) Scale in Table 3-1. Of the 146 students, 103 (70.5%) have had sexual

Table 3-1

Sexual Risk-Taking Rating (SRTR) of Students

SRTR	N=144	Total (%)	Cumulative Frequency
0 (virgin)	43	29.9	29.9
3	3	2.1	31.9
4	3	2.1	34.0
5	9	6.3	40.3
6	20	13.9	54.2
7	11	7.6	61.8
8	14	9.7	71.5
9	7	4.9	76.4
10	7	4.9	81.3
11	7	4.9	86.1
12	5	3.5	89.6
13	3	2.1	91.7
14	4	2.8	64.4
15	1	0.7	95.1
16	4	2.8	97.9
17	1	0.7	98.6
18	1	0.7	99.3
22	1	0.7	100.0

intercourse at least once. There was no significant gender variability [χ^2 (1, N = 146) = .654, p > .05] between those that have had sex and those that were not sexually active. The majority of subjects' (60.0%) age of first sexual intercourse was 17 or over. The student's reported the following number of sexual partners: 1 partner, 41.7%; 2 partners, 24.3%; 3-4 partners, 14.6% and 5 or more partners, 18.4%. Seven students reported have had sexual intercourse only once (6.8%). Twenty-two percent have sex monthly or less. Approximately 37% reported having sex weekly and 33% have sex more than once a week.

The use of contraception rate was 83.5% at first intercourse and 86.4% at last (or most recent) intercourse. Of the 103 sexually active students, 67% had discussed contraception with their partner before initial sexual intercourse. Further, of those that talked to their partner about contraception before their first time, 91% used contraceptives compared to the 67% birth control rate of those that did NOT discuss contraceptives before engaging in sexual intercourse their first time. Nine females had been, or were currently pregnant. None of the males reported that their partners had been or were currently pregnant. Six students, all females, claimed to have had a sexually transmitted disease. In total, the sexual activity range was between 0 (virgins) to 22 (highest sexual risk-taking rating). The mean sexual risk-taking rating for the males and females were 5.39 (SD=5.11) and 6.25 (SD=5.0), respectively. The mean gender differences were not significant (F(1, 142) = .657 p > .05).

All four of the regression equations were found to be significant at $p < .05$ (see Table 3-2). The best prediction equation, based on most variance accounted for, was the Developmental theme. Within that equation, three variables out of eight were

Table 3-2

Significant Regression Equations by Group

Group	F value	R	R^2
Developmental	$F(3, 104) = 10.974$ $p < .001$	.490	.240
Interpersonal	$F(1, 103) = 16.761$ $p < .001$	.374	.140
Risk-Taking	$F(2, 110) = 6.216$ $p < .01$	.319	.102
Sex Attitudes	$F(2, 136) = 15.235$ $p < .001$	.428	.183

Significant predictors: age, father's occupation, and age the adolescent began dating. As age increases, sex risk-taking also increased ($r = .342$, $p < .01$). Conversely, there was a significant negative relationship between age one first began to date and the SRTR ($r = -.268$, $p < .05$); the later the adolescent began to date, the lower the sexual risk-taking. Lastly, the occupation variables (both mother and father) were coded loosely from white-collared to blue-collared depending on specialized skills/training required. With this coding scheme, the father's occupation that required the least formalized education/skills was significantly related to adolescent higher sexual risk-taking ($r = .308$, $p < .01$). To note, the Pearson Product-Moment Correlation

Coefficient between high school marks and SRTR was significant ($r = -.236$, $p < .01$), however it did not account for any addition variance in the SRTR.

The second strongest regression model was the group that contained a variety of Sexual Attitudes. Of the eight variables in the stepwise regression, two were significant contributors at the .05 level: III23 "None of my friends are the kind of people who would be AIDS carriers, it's just not an issue with me" and III17 "It is against my values for me to have sex while I am unmarried". There is a significant inverse relationship between the belief that pre-marital sex is against his/her values and sexual risk-taking ($r = -.398$, $p < .001$). Secondly, those that believed that AIDS was not an issue for them also had significantly LOWER sexual risk taking ($r = -.237$ $p < .01$).

The third best regression equation to predict sexual risk taking was the Interpersonal theme. The only significant coefficient contributing to the variance was question III13: "The majority of my friends have had sex." There was a significant positive relationship ($r = .374$, $p < .01$) in that those with sexually active friends had higher sexual risk taking themselves.

Lastly, the group of variables that accounted for the least amount of variance in the SRTR was the Risk-Taking theme. Within that theme, two variables were significant predictors: religiosity (I14h) and trouble avoidance (I14f). Those that

reported attending religious services weekly ($r = -.238$, $p < .01$) and those that avoided trouble ($r = -.237$, $p < .01$) were more likely to be lower on the sexual risk-taking scale.

Discussion

Between the four groups, the Developmental group variables were the best predictors of sexual risk taking. Twenty- four percent of the variance could be accounted for by the variables in the Developmental area, specifically the demographics age, father's occupation and the age the adolescent began dating. As age increased and initial dating age decreased, so did the sexual risk-taking. Those that began dating at a young age increased the likelihood that they would become sexually active earlier and thus one would think they would have more experience dealing with contraception issues. Generally, with experience comes changes in sexual career and a sexually active person becomes more adept with contraception (Poppen, 1994). However, as adolescents grow older, the odds that they are sexually active increases, which means that by simply having sex, they are more open to the risks of sexual activity such a exposure to multiple partners or contraception reliability (Rosenthal, Biro, Succop, Bernstein, & Stanberry, 1997). Second, we might want to re-conceptualize the relationship between age and sexual risk-taking. Perhaps it is not the age of adolescents but the stage of their sexual experience that is more important. For example, compare a 19-year-old, who has recently lost her virginity, to an 17-year-old, who has been sexually active for 4 years. Can we predict who would be better at using

contraception by their age? Generally, the older the adolescents are when they begin to have sex, the better they are at using contraception compared to younger adolescents at the same experience (Faulkenberry, Vincent, James & Johnson, 1987; Rosenthal, Biro, Succop, Cohen, & Stanberry, 1994). It seems we must be cautious in using age solely as a predictor of sexual risk-taking without further context such as experience.

The relationship between fathers' occupation and their child's sexual risk-taking is such that the fathers with jobs that required the least amount of formalized education or skills had adolescents with higher sexual risk-taking (Harvey & Spigner, 1995). In this study, one must be careful in that we cannot make any assumptions about socio-economic status (SES) or earnings, as all of the occupations could potentially be lucrative and successful professions. This finding may, instead, be more of a comment on the attitude toward and the value of education within the family. Based on developmental cognitive theories, it has been proposed that adolescents that are future-oriented, as part of Piaget's formal operations, make better sexual decisions as they perceive long-term consequences of actions (Gordon, 1996). This finding is also consistent with Dash's (1989) assertion that sexual experience was related to perception of poor future vocational opportunities. Luster and Small (1994) suggest "that teens who are not succeeding at school and who perceive a dim future for themselves are less likely to delay intercourse." (p. 190).

Sexual Attitudes accounted for approximately 18% of the variance in sexual risk-taking. The two attitudes that were significant predictors were that those who believed AIDS was irrelevant to their peer group and those that believed sex is against their values. While it seems intuitive that those that believe pre-marital sex to be wrong for them to have a low SRTR, it is puzzling that those that disregarded AIDS as a real threat to them and their friends did not have HIGHER sexual risk-taking. Upon further analysis on only the sexually active students (n=96), this attitude was not significant (r = .024, p > .05) suggesting that it was predicting the sexual activity not the sexually risk-taking. In other words, those that did not see AIDS as a threat, were not sexually active. Generally, perceived susceptibility to STDs seems to increase safer sex practices (Keller, Duerst & Zimmerman, 1996).

Within the Interpersonal theme, only friends' sexual activity was a significant coefficient. Within a larger peer context, there is much evidence that "like attracts like" in that adolescents chose friends that support and reflect their own current view of themselves (Savin-Williams & Berndt, 1993). Selection of friends typically follows from attitudes, beliefs and values. Thus adolescents with more permissive sexual attitudes are more like to seek out similar sexually active friends (Whitbeck, Conger, Simons & Kao, 1993). Interestingly, their friends' sexual activity was the only variable that was a concrete behaviour. The other variables were the adolescent's perceptions regarding the relationships in their life: whether they felt they could communicate with

their parent(s) or how they view their close social relationships. Those perceptions were NOT significant predictors to their sexual risk-taking.

The least predictive regression model was the Risk-Taking group. Both religiosity and an indication of norm-breaking behaviour were significant predictors. The role of religion in sexual decisions has been difficult to ascertain. Some researchers have found that young people who attend church or profess religious values to have less permissive attitudes, be less sexually active and use contraceptives less frequently (Spees, 1987; Thornton & Camburn, 1989). Other researchers have found no such relationship (Collins & Robinson, 1986; Schnirer, 1996). The link between deviant behaviour and sexual risk-taking is a lot more clear (Whitbeck, Conger, Simons & Kao, 1993). In much of the sexuality research variables such as drug/alcohol usage, smoking, and high school marks have been indicators of sexual decision-making. In this study, they were NOT significant predictors. This probably can be attributed to the homogeneity of the sample more than the lack of validity of their usefulness. Those working with high achieving adolescents may have a more difficult time targeting the "at-risk" student as the usual predictors may not be applicable.

Conclusion

When one wants to attack the problems associated with adolescent sexuality in a pro-active manner, it would be helpful to identity the beliefs, attitudes or behaviours that signal possible sexual risk-taking in the future. The overabundance of variables

related to irresponsible sexual activity makes this task difficult. Should we focus on other risk taking behaviour ? personality indicators? social factors? cognitive processes? Generally, researchers have focused on two approaches: Selecting a few variables from the various areas to cover a broad range or focus on one area and investigate it with more depth. It seems that both approaches should be combined so that we can compare BETWEEN groups and WITHIN groups. For example, the use of risk-taking and academic variables seem more valid in predicting early or middle adolescent sexual risking. In other words, we could identify specific key predictors for different adolescent populations. In this study, it seems demographic information and behaviours; age, father's occupation, initial dating age, religiosity, peer sexual activity etc., were the best predictors for late adolescent university students. This may be helpful to help identity and plan interventions for those in the highest risk group of poor sexual decision- making within a college population.

Endnotes

[1]205 students participated: 59 students were not included because (a) they did not meet the sample age criteria, (b) they were sexually active involuntarily (rape, incest) or (c) their data was incomplete

[2]see Appendix C: Instrument for exact questions. Developmental: I1, I8, I10, I11, I6a, I6b, I14o, V2; Interpersonal: I14a, I14b, I14c, I14j, I14k, I14l, I14m, III13; Sexual Attitudes: III1, III4, III6, III17, III18, III21, III23, III24; Risk-Taking: I9, I14e, I14f, I14g, I14h, VII2, VII3, VII4

References

Biro, F.M. (1992). Adolescents and sexually transmitted diseases. Maternal and Child Health Technical Information Bulletin. Washington, DC: National Center for Education in Maternal and Child Health.

Coker, A.L., Richter, D.L., Valois, R.F., McKeown, R.E., Garrison, C.Z., & Vincent, M.L. (1994). Correlates and consequences of early initiation of sexual intercourse. Journal of School Health, 64, 372-377.

Collins, J.K., & Robinson, L. (1986). The contraceptive knowledge, attitudes and practice of unmarried adolescents. Australian Journal of Sex, Marriage and Family, 7, 132-152.

Cooper, M., Peirce, R., & Huselid, R. (1994). Substance use and sexual risk taking among Black adolescents and White adolescents. Health Psychology, 13, 251-262.

Crawford, J., Turtle, A. & Kippax, S. (1990). Student favoured strategies for AIDS avoidance. Australian Journal of Psychology, 42, 123-137.

Dash, L. (1989). When children want children: The urban crisis of teenage childbearing. New York: William Morrow.

Ensign, J., Scherman, A., & Clark, J.J. (1998). The relationship of family structure and conflict to levels of intimacy and parental attachment in college students. Adolescence, 33, 575-583.

Faulkenberry, J.R., Vincent, M., James, A., & Johnson, W. (1987). Coital behaviors, attitudes, and knowledge of students who experience early coitus. Adolescence, 22, 321-332.

Fehlauer, E. (1992). Attitudes, influences and expectations of adolescent dating behaviors: A survey of high school students. Unpublished Masters Thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Flick, L.H. (1986). Paths to adolescent parenthood: Implications for prevention. Public Health Reports, 101, 132-147.

Gordon, C.P. (1996). Adolescent decision making: A broadly based theory and its application to the prevention of early pregnancy. Adolescence, 31, 561-585.

Green, V. Johnson, S., & Kaplan, D. (1992). Predictors of adolescent female decision making regarding contraceptive usage. Adolescence, 27, 613-632.

Harvey, S.M., & Spigner, C. (1995). Factors associated with sexual behavior among adolescents: A multivariate analysis. Adolescence, 30, 253-264.

Holden, G.W., Nelson, P., Velasquez, J., & Ritchie, K.L. (1993). Cognitive, psychosocial, and reported sexual behavior differences between pregnant and nonpregnant adolescents. Adolescence, 28, 557-572.

Keller, M.L., Duerst, B.L., & Zimmerman, J. (1996). Adolescents' views of sexual decision-making. Image- The Journal of Nursing Scholarship, 28, 125-130.

Lagana, L., & Luciana, H. (1999). Psychosocial Correlates of Contraceptive Practices During Late Adolescence. Adolescence, 34, 463-483.

Luster, T., & Small, S.A. (1994). Factors associated with sexual risk-taking behaviors among adolescents. Journal of Marriage and the Family, 56, 622-632.

McLean, A.L., & Flanigan, B.J. (1993). Transition-marking behaviors of adolescent males at first intercourse. Adolescence, 28, 579-595.

Moore, S., & Rosenthal, D. (1992). The social context of adolescent sexuality: Safe sex implications. Journal of Adolescence, 15, 415-435.

Morgan, C., Chapar, G.N., & Fisher, M. (1995). Psychosocial variables associated with teenage pregnancy. Adolescence, 30, 277-289.

Poppen, P.J. (1994). Adolescent contraceptive use and communication: Changes over a decade. Adolescence, 29, 503-514.

Richter, D.L., Valois, R.F., McKeown, R.E., & Vincent, M.L. (1993). Correlates of condom use and number of sexual partners among high school adolescents. Journal of School Health, 63, 91-96.

Rodgers, J.L., & Rowe, D.C. (1990). Adolescent sexual activity and mildly deviant behavior. Journal of Family Issues, 11, 274-293.

Rosenthal, D., Hall, C., & Moore, S. (1992). AIDS, adolescents and sexual risk-taking. A test of the Health Beliefs Model. Australian Psychologist, 27, 166-171.

Rosenthal, S.L., Biro, F.M., Succop, P.A., Bernstein, D.I., & Stanberry, L.R. (1997). Impact of demographics, sexual history, and psychological functioning on the acquisition of STDs in adolescents. Adolescence, 32, 757-770.

Rosenthal, S.L., Biro, F.M., Succop, P.A., Cohen, S.S., & Startberry, L.R. (1994). Age of first intercourse and risk of STD. Adolescent and Pediatric Gynecology, 7, 210-213.

Savin-Williams, R.C., & Berndt, T.J. (1993). Friendship and peer relations. in S.S. Feldman & G.R. Elliott (Eds.), At the threshold: The developing adolescent (pp.330-351). Cambridge, MA: Harvard University Press.

Schnirer, L. (1996). Adolescent sexuality in rural Alberta. Unpublished master's thesis, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada.

Small, S.A., & Luster, T. (1994). Adolescent sexual activity: An ecological, risk-factor approach. Journal of Marriage and the Family, 56, 181-192.

Spees, E.R. (1987). College students' sexual attitudes and behaviors, 1974-1985: A review of the literature. Journal of College Student Personnel, 28, 135-140.

Thornton, A., & Camburn, D. (1989). Religious participation and adolescent sexual behavior and attitudes. Journal of Marriage and the Family, 51, 641-652.

Werner, E.E. (1999). Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. In L.E. Berk (Ed.), Landscapes of development: An anthology of readings. (pp.445-460). Belmont, CA: Wadsworth Publishing Co.

Whitbeck, L.B., Conger, R.D., & Kao, M.Y. (1993). The influence of parental support, depressed affect, and peers on the sexual behavior of adolescent girls. Journal of Family Issues, 14, 261-278.

Whitbeck, L.B., Conger, R.D., Simons, R.L., & Kao, M.Y. (1993). Minor deviant behaviors and adolescent sexual activity. Youth & Society, 25, 24-37.

White, S.D. & DeBlassie, R.R. (1992). Adolescent Sexual Behavior. Adolescence, 27, 183-191.

Summary

The goal of the research in this dissertation was to investigate the relationship between various developmental constructs (ego identity, egocentrism and background variables) and sexual activity. Three main questions were proposed in the first chapter and the following is a summary of my findings. The questions are presented, followed by a summary of the research and findings pertaining to each.

1. Ego Identity: Is there an effect of identity development (diffusion, foreclosure, moratorium and identity achievement) and background variables (religiosity, alcohol/drug usage, parental communication, academic achievement) on the level of sexual activity?

One of the main tasks during adolescence is to gain a sense of self that is separate from parental and childhood roles. This includes forming ideology that defines future vocations, philosophical/political/religious values and interpersonal relationships. Erikson (1980) defined this psychosocial struggle as identity vs. role confusion. Marcia (1966) operationalized Erikson's theory by developing four stages based on the absence or engagement of exploration and commitment. Those that are not actively searching nor committed to any ideology are in the Diffusion stage. Foreclosed adolescents have also not explored their options but have committed to an ideology. Moratorium adolescents are actively searching for core identity components but have not settled on

any specific one. Lastly, adolescents in the Achievement stage have actively investigated and evaluated options and have now committed to an identity.

From this ego identity research, some general trends were found. Foreclosed students had the lowest sexual experiences, which was significantly different from students in both ego identity statuses of Diffusion and Achievement. While both of them were high, the difference between students in the two statuses seemed to be in responsible decision making. For example, there were a higher percentage of diffused late adolescents that did not use contraception during their initial and most recent sexual encounter compared to achieved late adolescents. Lastly, Moratorium students were the most diverse and were not significantly different from any of the other statuses. Since Moratorium is usually the status that is considered closest to Erikson's initial concept of "identity crisis", their sexual pattern seems to involve much experimentation, autonomy and role playing. Thus, the Moratorium adolescent will probably be the hardest student in which to predict their sexual attitudes and behaviours as they explore different identity options, including various sexual identities.

2. Are adolescent personal fables concepts (omnipotence, invulnerability and personal uniqueness) combined with relevant background variables (e.g., impulsivity, peer influences, parental communication, academic achievement) predictive of sexual activity?

The theoretical construct of adolescent egocentrism, as conceptualized by Elkind, suggests that adolescents lack the experience in which to evaluate their new formal operation thinking skills. This leads to the erroneous conclusions that 1) others find their thoughts and behaviours equally as compelling as they do themselves (imaginary audience), and 2) their thoughts are so original and profound to themselves, it must mean that they are somehow special and unique (personal fable). It has been suggested that these personal fable constructs, as measured by Lapsley; feelings of omnipotence, invulnerability and uniqueness are partially responsible for sensation-seeking, risk-taking and the "it won't happen to me" attitude of many adolescents.

From the many regression equations, on average, 10% of the variance of sexual experience could be accounted for by the four predictors Invulnerably, Omnipotence, Personal Uniqueness and Outside Variable. The Personal Fable construct as a whole was a poor predictor of sexual experience as were the subscales of Invulnerability and Personal Uniqueness. In almost every instance, Omnipotence and the Outside Variable were the significant coefficents. As feelings of powerfulness and control increased, so did sexual activity. While Personal Fable constructs are usually conceptualized as negative features, in seems in the Omnipotence subscale, values such as confidence and self-assuredness, which may be positive or protective conceptions, still have negative consequences.

3. Other Variables: How well do the background variables (developmental constructs such as age; interpersonal constructs such as familial relationships; risk-taking constructs such as alcohol/drug usage and sexual attitudes) predict irresponsible sexual experience?

Other variables were used in both the theoretical analysis in the ego identity and personal fable investigations and on their own in a third analysis. They included four general categories of questions:

1. Developmental constructs such as age, past academic status and future goals,
2. Interpersonal relationships such as familial and peer ties,
3. Other risk-taking indicators such as religiosity, risk-taking behaviours, impulsivity, and
4. Sexual Attitudes such as thoughts on pre-marital sex, STDs and dating.

This list of examples of the various variables is not complete. Please refer to Sections I, III, V and VII in the Instrument (Appendix C) for the entire list of questions. Background variables were used in all three papers but each paper had a specific question, thus the background variables were created, chosen and combined in a way that was most relevant to the investigation. The following is a summary of some of the significant findings in all three papers, individually, and as they relate together,

combined with other findings in the literature. The categories used above, and in Paper 3, are used here as headings to group these "Other Variables".

Developmental

In comparing the group of variables, the Developmental group, specifically age, father's occupation and initial dating age was the best predictor of late adolescent sexual risk-taking and experience accounting for almost 25% of the variance in the SRTR. These findings are unsurprising as one would expect an adolescent to be more likely to be sexually active as they get older and if they began dating at a younger age, would be more likely to be exposed to sexual risks. Father's occupation is more difficult to ascertain the connection as data were arranged based on approximate level of education. What is the connection between a father's education and/or occupation and their child's sexual risk-taking? The most plausible hypothesis is that parents sexually socialize their children in many direct and indirect ways. A direct way would be to communicate with the teen about sexual issues, helping them make decisions and providing overt guidance. A more indirect way is through the example of their behaviour or in the context of larger issues. Katchadourian (1993) illustrates this point:

> For instance, a middle-class family may foster principles of self-restraint and postponement of gratification in general. The youngster is then expected to apply these precepts to sexual behavior. The attitudes and expectations of teenagers with regard to academic achievement tend to mirror their parents' level of education and aspiration for their children. The higher academic goal

> orientation of youngsters from better-educated, more affluent families in turn makes it less likely that they will engage in coitus at an early age. (p. 341)

Thus, demographic information like parental occupation or educational background can be conceptualized as another indicator of interpersonal relationships and social context.

Interpersonal

Interpersonal relationships significantly influenced their sexual behaviour. If they were within a peer group that they perceived to be sexual, they themselves were more sexual. Those that participated in high school team sports were more sexually active (which may be tied to social status and increased mixed gender opportunities to socialize). Conversely, those that were not sexually active reported that their friends were not sexually active. Also, those that reported that their parents approved of their sexual activity had higher rates of sexual experience. However, having a good relationship with a mother lowered the average adolescent sexual experience rating.

Reports from parents and mass media suggest that peer norms can often contribute to truancy, sexual risk-taking and delinquency. Adolescence is the first time in which the peer group gradually supplants the family and becomes the main source of socialization as teenagers set about to form an identity distinct from their parents and separate from their childhood role. This renegotiation universally results in some conflict, though usually brief and trite (Hill, 1988; Smetana, 1988). Parents and teachers are often afraid of "bad influences": that a teen will start to associate with delinquent, dubious peers, become negatively influenced, and thus start adopting the

fatalistic values and behaviours of these peers. In this case, promiscuity and sexual risk taking may be part of the negative peer context.

Should we be concerned about the effect of peer relationships on risk-taking attitudes and behaviours? In general, this "bad influence" theory has not been supported. It is not so much peer pressure but peer conformity that is happening. Like attracts like (Savin-Williams & Berndt, 1993).

> "...it is often difficult to separate the influence of friends from the choice of particular friends in the first place. The relationship is often reciprocal: the sexual behavior of the adolescent helps determine the crowd he or she runs with; conversely, the sexual behavior patterns of the crowd influence the behavior of the individual associated with it" (Katchadourian, 1993, p.345).

Secondly, although peers are the more prominent vehicle of socialization at this time, other interpersonal relationships still mediate and moderate this process. For example, there is evidence that family/parental relationships influence the peer associations which in turn, influence their patterns of sexual behaviours and attitudes. (Whitbeck, Conger, & Kao, 1993). "Evidence suggests that weak bonding to parents allows, but does not foster, sexual activity among adolescents by permitting peer associations that reinforce perceptions that the rewards of sex outweigh the costs" (DiBlasio & Benda, 1994, p. 352). One must also consider the role of social learning principles, such as modeling, as influences. Whitebeck, Simons and Kao (1994) found that divorced mothers' dating behaviour influenced the sexual behaviour and attitudes of both their sons and daughters. There is further evidence that having a mother or sister who are

pregnant as a teenager and living in a non-intact family increases the chances of earlier initiation of sexual intercourse (Crockett, Bingham, Chopak & Vicary, 1996).

It was found that those students that talked a great deal to their parents about sex had higher rates of sexual activity. This is indeed, counter to most literature that suggests that open communication at appropriate developmental levels is not related to or inversely related to sexual activity (Jensen, de Gaston, & Weed, 1994; Newcomer & Udry, 1983). Upon further analysis of those that spoke to their parents "a great deal", there was a significant difference between those that discussed sex before or after the adolescent's initial sexual experiences ($F(1, 45) = 9.349$ $p < .01$). The students that spoke to their parents about sex BEFORE becoming sexually active had a significantly lower sexual activity rating ($M = 2.51$), than did those that talked to their parents a great deal AFTER having had sex ($M = 3.67$). Thus, when analyzed together, the "great deal" students were different from the students who spoke to their parent "a bit" or "not at all". All these interpersonal connections suggest a need to further explore social contexts.

Risk-Taking

Late adolescents who partook in risk-taking behaviours had higher rates of sexual activity although these risk-taking behaviours were not the best predictors of their sexual risk-taking. The link between alcohol, early dating, impulsivity, delinquency and sexual activity has been well documented as predictors (Capaldi,

Crosby, & Stoolmiller, 1996; Cooper, & Orcutt, 1997; Harvey & Spigner, 1995; Langer, & Tubman, 1997). However, it was found in this data that risk-taking variables differentiate lower levels of sexual activity from high levels of sexual activity, not just that virgins are different from non-virgins. For example, when looking at the use of contraception, those that did not use any birth control, including "withdrawal", had significantly higher sexual activity ratings than those that used birth control ($F(1, 99) = 3.288$ $p < .10$).

Sexual Beliefs/Attitudes

Sexual Attitudes and Beliefs was a significant predictor of late adolescent sexual risk-taking. Seven belief statements were also found to have a significant effect on the mean differences in their sexual experience. Two comments are worth mentioning in regard to this finding. First, the significant beliefs and resultant behaviours were predictable: those that believed pre-marital sex was wrong or immoral had significantly lower sexual experience. Secondly, the homogeneity of the sample did not allow for any variability for a lot of the questions and thus, analysis was not possible. For example, in question III8 (It is okay to tell someone I love them to get them to have sex with me) and III18 (If a girl gets pregnant, it is completely her fault), an overwhelming majority of the students disagreed with the questions, 100% and 95.1% respectively. If one had a less high achieving, middle class sample, would these

results still be found? And would these divergent attitudes then have had more of an effect on the sexual experiences of the adolescents that profess those attitudes?

Limitations

In Chapter 1, certain issues regarding sampling, scope, and content were introduced to provide boundaries to the study. Throughout the research process, these issues and more arose and it seems that a re-visitation of the limitations and delimitations is needed to recognize the complexity of developmental research. Hopefully, it will challenge other researchers to think about these issues when designing their own studies.

Sampling

Choosing late adolescents as the focus of this investigation was done purposely for many reasons. Pragmatically, I wanted a more manageable study in which to test the theories before applying them to a larger, more complex design with younger and, potentially more unreliable, students. Also, given the strict ethical considerations (rightfully so), it is much easier to gain access to data without the added issue of parental consent. Theoretically, there is a current and compelling new theory of development from late teens through twenties , presently, generally refereed to as late adolescence, called "emerging adulthood" (Arnett, 2000). In this article, Arnett provides evidence, which includes identity issues, that the 18 to 25 year-old stage of development is clearly different than adolescence and adulthood and, further, calls for

significantly more research to investigate the stage. Also, to maintain the integrity of the instruments, a college-age sample was needed for the norms to be valid.

The applicability of results from such a sample also need to be considered. Much of the research on identity issues is on a university population: this makes it easier to assess and replicate comparable studies. However, how widely can one generalize the findings? The majority of students in this study were in the Faculties of Education and Arts. Would we find similar results using students in Engineering or Medicine? One could not be sure. Further, how representative are University of Alberta students of "typical" late adolescents? Can we make statements that these findings can generalize to all Canadians of this age? Would we find similar results at an American university?

To estimate the generalizability, I attempted to use stratefied sampling techniques. This involves describing the sampling frame and attempting to match it on variables in the population. The key variables I used were age, high school grades, ethnicity, and university achievement (GPA). In trying to investigate the population on those same key variables, I contacted universities across Canada. Unfortunately, that data was more difficult to attain than anticipated. Conservatively, I can probably use my sample to make inferences about populations in Alberta. As for wider inferences, that will be left to readers to decide whether it is appropriate to generalize to other populations.

Theoretical Constructs

In Chapter 1, the construct of "identity" was delimited to be as conceptualized by Erikson and operationalized by Marcia. However, I think it is important to acknowledge alternative views in this area.

Many have argued that Erikson's identity theory is not sensitive to the possible sex differences in identity formation. There is evidence that interpersonal issues are much more important to the female identity process and that women define themselves within a context or relationships and important connections (Archer, 1992; Gilligan, 1982). Further, many researchers have suggested that intimacy and identity concerns tend to merge for women, rather than to be resolved in a stepwise manner (see Patterson, Sochting, & Marcia, 1992 for review). The theoretical connection between intimacy and identity was not part of this study as I wanted to first test Erikson's initial conceptualization of the need for resolution of identity vs identity diffusion before intimacy can be addressed. Much has been written about the relationship between these two constructs (See Adams & Archer, 1994 for review). The relationship between sexuality, intimacy and identity needs to be further explored.

Identity issues are further complicated by ethnic and cultural differences. Once must consider the interaction of development and context in a broader ecological model of development. In the review of the ethnic identity literature, Phinney and Rosenthal (1992) raise important questions:

> What process enable the minority adolescent to integrate ethnic identity with other identities into a meta-identity?... What happens to ethnic identity in early and later adulthood, when the relatively sheltered environments of home and school are replaced by work and greater contact with the mainstream society"... What are the consequences for minority youth of living in a mainstream culture that has a "melting pot," assimilationist ethos, versus a multicultural, pluralistic society? How does ethnic identity manifest itself in xenophobic societies where "outsiders" are never truly accepted? (p. 167).

Implications and Recommendations

Future Research

From this study and the adolescent sexuality literature, the plethora of contradictory evidence makes it difficult to form solid conclusions in which to direct future research and plan sex education or interventions. The challenge of social science research is to understand the complexity of humans and further our knowledge of thoughts, behaviours, and attitudes. Often, in order to have a manageable study, it is necessary for researchers to either focus on details, ignoring the wider context or try to incorporate many variables across areas and ages with less depth. It seems a more systematic approach is warranted. For example, the term "adolescent" is frequently applied to cover ages 12 to 22 although through such things as the media, we come to typify a teen-ager as the middle adolescent: a secondary student in the midst of identity

and interpersonal stress. Early, middle and late adolescents seem to be developmentally distinct and are often facing different problems and life choices. When trying to sort out what is relevant in the sexuality literature, we must be clear as to the adolescents we are speaking of and to. In other words, what is the goal of each researcher: To identify 'at-risk" pre-teens for early interventions? to describe middle adolescent dating patterns? to better understand the decision making process in late adolescents? While this may be an obvious recommendation, it is one that each researcher must confront in order to plan manageable and interpretable research studies. It is the one issue that kept this researcher focused when encountering the adolescent sexuality research literature.

The following are specific recommendations from the results of this study. It has become apparent that several questions are needed to further the investigation. As Developmental (i.e., background demographics) variables were the most significant predictor of risk-taking with this late adolescent sample, this author would include questions such as:

1. Are your biological parents still married? If not, at what age did they separate? divorce? die?
2. Is your mother re-married or living with a partner? Is your father re-married or living with a partner?
3. Growing up, with whom did you live with the majority of the time?

4. Who would you consider the most important influence in your life now? while growing up?
5. During junior high and high school, where did you live? (in a large city, in a small town, in a rural (farm) community, on an acreage near a town)
6. During the average week, approximately how many hours do you watch television? read? listen to music? surf the Net for personal interest? study/work on school assignments? work?

These questions are all designed to further our knowledge of developmental variables and their associated social contexts.

An additional investigation of the relationship between these adolescent developmental constructs is warranted. Much research has been done in investigating the relationship between egocentrism and identity. O'Connor and Nikolic (1990) suggest that the identity development processes are the primary source of adolescent egocentrism. Adolescents may feel unique and self-conscious because of the new feelings and profound thoughts that are part of the effort to define themselves. O'Connor (1995) found evidence of this relationship: "Consistent with this view were the findings that AES (Adolescent Egocentrism Scale) egocentrism was associated with higher levels of identity achievement and identity crisis, and that IAS (Imaginary Audience Scale) egocentrism was associated with higher levels of identity crisis" (p.221). The investigation of egocentrism, specifically personal fable and ego identity

within a sexual context would have been a natural extension of this research. To incorporate so many different variables and levels of variables, a large sample size is needed. Unfortunately, in this study there were insufficient data in some groups to run a proper analysis.

Lastly, as aforementioned, the homogeneity of the sample is problematic if you wish to generalize to a population outside of the university setting. The next investigation of these constructs should include a more heterogeneous sample.

Methodological

Since this study, the E-OMEIS (Adams, 1994; Adams & Ethier, 1999) and New Personal Fable Scale (Lapsley, 1999) have been re-visited by the authors thus any further investigations with these instruments should include their revisions.

Secondly, some of the sexual attitudes questions would be reduced. Questions were written with subtle differences to allow for specificity of beliefs. But such subtly was either ignored or lost in the general message. For example, several questions in Section III asked about the students' views of pre-marital sex under different circumstances:

1. Having sex before marriage is okay if both people agree to it (III1)
2. Having sex before marriage is okay only if the couple is planning to marry (III16)

3. Having sex before marriage is okay as long as the couple is close, even if they don't plan to marry (III20)
4. It is against my values for me to have sex while I am unmarried (III23)

Students answered the same on all four questions: either they believed pre-marital sex was okay or they did not. Thus, in even a late adolescent, high achieving sample, sexual values and beliefs were quite concrete and thus, measuring the "gray area" was unsuccessful.

Other questions would be deleted or otherwise re-conceptualized. Again, the homogeneity of the sample must be considered when trying to measure certain constructs. For example, I12 was written as an indication of conservatism. Given that the data was collected in a large, urban, public university setting, there was no variability as the students were overwhelmingly "liberal" in their views.

The Last Word

As with the survey itself, I want the last words to be those of the subjects. Thirty-nine percent of the subjects responded to the open-ended question asking for feedback about both the instrument and any part of their dating/sexuality they wish to further elaborate. There was insufficient data to do a formal qualitative content analysis however the comments fell into three general categories: research comments (recommendations, inconsistencies, praise), general sexuality observations, and

explanations of personal sexual experiences or beliefs. I hope to acknowledge these questions, issues and concerns in my future research.

1. Do late adolescents re-frame their sexuality within the context of marriage and/or parenting?
2. Does sexual experimentation (e.g., bi-sexual or homosexual exploration) happen more in a post-secondary school situation?
3. Why do some respondents find it easy to ascertain their peers' sexual activity while others find it very difficult?

Lastly, the following illustrations are provided to remind those interested in adolescent sexuality research that it is filled with complex, challenging issues that requires thoughtful and thorough investigations.

> It is weird to do this questionnaire because I am dating, but we are not sexually active. He lives to (sic) far away, but I'm pretty sure we would be if he lived here. We are forced to talk openly about sex and because of this we have already take the precautions that will mean I won't get pregnant and we both know we will not contract STDs. It would have been different if he stayed here and when he comes home we will both be ready to share in our sexual experiences with each other. (female, 22 years old)

> ... my sexual experience is kind of a complex situation. I had sex once (alcohol was present), but with the same partner did everything but afterwards, and was sober. (female, 19 years old)

I have chosen a religious path that has helped me decide to sexual abstain until I am married. For this I am grateful as I have seen the hurt and destruction caused by pre-marital sex. My fiancee and I are waiting until we are wed to do anything more than light petting and through this we can be bonded in love the way God intended it. (male, 22 years old)

I've been only with one partner. We were both virgins which has always been a source of security for me. One thing worries me is for when we break up ⇒ I'll have to actually worry about STDs. Scary stuff. I worry about my friends who have boyfriends with lots of past partners. I just hope that they really are careful. (female, 19 years old)

References

Adams, G.R. (1994). Revised classification criteria for the Extended Objective Measure of Ego Identity Status: A rejoinder. Journal of Adolescence, 17, 551-556.

Adams, G.R., & Archer, S. L. (1994). Identity: A precursor to intimacy. In S.L. Archer, (Ed.), Interventions for adolescent identity development (pp. 193-213). Thousand Oaks, CA: Sage Publications.

Adams, G.R., & Ethier, J.L. (1999). The Objective Measure of Ego Identity Status: A manual on theory and test construction. Department of Family Relations and Applied Nutrition, University of Guelph.

Archer, S.L. (1992). A feminist's approach to identity research. In G.R. Adams, T.P. Gullotta, & R. Montemayor, (Eds.), Advances in adolescent development: Vol. 4. Adolescent identity formation (pp. 25-49). Newbury Park, CA: Sage Publications.

Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. American Psychologist, 55(5), 469-480.

Capaldi, D. M., Crosby, L., & Stoolmiller, M. (1996). Predicting the timing of first sexual intercourse for at-risk adolescent males. Child Development, 67, 344-359.

Cooper, M., & Orcutt, H. K. (1997). Drinking and sexual experience on first dates among adolescents. Journal of Abnormal Psychology, 106, 191-202.

Crockett, L.J., Bingham, C.R., Chopak, J.S., and Vicary, J.R. (1996). Timing of first sexual intercourse: The role of social control, social learning, and problem behavior. Journal of Youth and Adolescence, 25(1), 89-111.

DiBlasio, F.A., & Benda, B.B. (1994). A conceptual model of sexually active peer association. Youth and Society, 25, 351-367.

Erikson, E.H. (1980). Identity and the life cycle: A reissue. New York, NY: W.W. Norton & Co.

Gilligan, C. (1982). In a different voice. Cambridge, MA: Harvard University Press.

Harvey, S.M., & Spigner, C. (1995). Factors associated with sexual behavior among adolescents: A multivariate analysis. Adolescence, 30, 253-264.

Hill, J.P. (1988). Adapting to menarche: Familial control and conflict. In M.A. Gunnar & W.A. Collins, (Eds.), Developing during transition to adolescence, 21. (pp. 43-77). Hillsdale, N.J.: Erlbaum.

Jensen, L.C., de Gaston, J.F., & Weed, S.E. (1994). Societal and parental influences on adolescent sexual behavior. Psychological Reports, 75, 928-930.

Katchadourian, H. (1993). Sexuality. In S.S. Feldman & G.R. Elliott (Eds.), At the threshold: The developing adolescent (pp.330-351). Cambridge, MA: Harvard University Press.

Langer, L.M., & Tubman, J.G. (1997). Risky sexual behavior among substance-abusing adolescents: Psychosocial and contextual factors. American Journal of Orthopsychiatry, 67, 315-322.

Lapsley, D.K. (1999). Personal communication with author. Oct 6, 1999.

Marcia, J.E. (1966). Development and validation of ego-identity status. Journal of Personality and Social Psychology, 3, 551-558.

Newcomer, S.F., & Udry, J.R. (1983). Adolescent sexual behavior and popularity. Adolescence, 18, 515-522.

O'Connor, B.P. (1995). Identity development and perceived parental behavior as sources of adolescent egocentrism. Journal of Youth and Adolescence, 24, 205-227.

O'Connor, B.P., & Nikolic, J. (1990). Identity development and formal operations as sources of adolescent egocentrism. Journal of Youth and Adolescence, 19, 149-158.

Patterson, S.J., Sochting, I. & Marcia, J.E. (1992). The inner space and beyond: Women and identity. In G.R. Adams, T.P. Gullotta, & R. Montemayor, (Eds.), Advances in adolescent development: Vol. 4. Adolescent identity formation (pp. 25-49). Newbury Park, CA: Sage Publications.

Phinney, J.S., & Rosenthal, D.A. (1992). Ethnic identity in adolescence: Process, context, and outcome. In G.R. Adams, T.P. Gullotta, & R. Montemayor,

(Eds.), Advances in adolescent development: Vol. 4. Adolescent identity formation (pp. 25-49). Newbury Park, CA: Sage Publications.

Savin-Williams, R.C., & Berndt, T.J. (1993). Friendship and peer relations. In S. S. Feldman & G. R. Elliott (Eds.), At the threshold: The developing adolescent (pp. 277-307). Cambridge, MA: Harvard University Press.

Smetana, J.G. (1988). Concepts of self and social convention: Adolescents' and parents' reasoning about hypothetical and actual family conflicts. In M.A. Gunnar & W.A. Collins, (Eds.), Developing during transition to adolescence: Minnesota symposia on child psychology, 21. (pp. 79-119). Hillsdale, N.J.: Erlbaum,

Whibeck, L.B., Conger, R.D., & Kao, M.Y. (1993). The influence of parental support, depressed affect, and peers on the sexual behaviors of adolescent girls. Journal of Family Issues, 14, 261-278.

Whitbeck, L.B., Simons, R.L., & Kao, M.Y. (1994). The effects of divorced mothers' dating behaviors and sexual attitudes on the sexual attitudes and behaviors of their adolescent children. Journal of Marriage and the Family, 56, 615-621.

Department of Educational Psychology
University of Alberta

Dear Student:

As you are probably aware, there is increasing concern in the health and teaching professions about the reported numbers of sexually active teenagers, and the resultant problems of sexually transmitted diseases, pregnancies and teen parents. On the basis of our work with high school students, we have prepared a research study which will focus on the dating behaviors and attitudes of early, middle and late adolescents. We are asking post-secondary students to also participate in this survey to give us a sample in which to compare to secondary students.

We believe that assumptions and expectations regarding adolescent sexuality are not accurate when compared to actual behaviors of the majority of our students. Therefore, we need the participation of *all* our students, even if they are not currently dating or sexually active, for the data to be precise and unbiased.

Your participation is strictly voluntary. No student names or ID #'s are required since the study is being conducted anonymously. Once the information is collected, the original questionnaires will be destroyed.

However, before we can do anything, we need your permission. If you choose to participate, please sign the following form indicating your consent.

Thank you for your assistance.

Yours sincerely,

Gretchen Hess, Ph.D.
Professor, Department of Educational Psychology
University of Alberta

Laurie Schnirer, M.Ed., Ph.D. (candidate)
Department of Educational Psychology
University of Alberta

Are you willing to participate in this study?

1. WHAT WILL THIS INVOLVE?

You will be asked to complete one questionnaire which will take a total of about 30 to 40 minutes to complete. The questionnaire consists of: a) demographic information, b) personal dating behaviors, c) sexual attitude questions, d) expected dating behaviors of peers and e) student questions, concerns, viewpoints that arise from the questionnaire

2. WHAT WILL I GAIN FROM THIS STUDY?

As future teachers, this subject will impact on your teaching in and out of the classroom. It seems crucial to normalize the sexual experiences of adolescents. Your participation will help researchers:

- give students basic information about peers in order to make informed decisions about their own sexual behavior,
- present parents needed information on the behavior of "typical teenagers" so that they can guide their own adolescents with realistic expectations,
- guide educators, health workers and counselors to plan more effective prevention and intervention programs, and
- plan a more effective curriculum to deal with these issues.

Lastly, this survey will hopefully help you to reflect on your own sexual behavior and attitudes.

3. WHERE CAN I GET ADDITIONAL INFORMATION ABOUT THIS STUDY?

We encourage you to contact us if you have any concerns or questions:

Dr. Gretchen Hess
Professor
Department of Educational Psychology
University of Alberta
ph. 492-1155
email: gretchen.hess@ualberta.ca

Laurie Schnirer, M.Ed.
Doctoral Student
Department of Educational Psychology
University of Alberta
ph. 492-5245
email: schnirer@ualberta.ca

4. WHERE CAN I GET HELP TO DEAL WITH THESE ISSUES?

Student Counselling Services
SUB
492-5205

Sexual Assault Centre
SUB
492-9771

Planned Parenthood
50 - 9912 106 St
423-3737

Catholic Social Services
8815 - 99 St.
432-1137

Adolescent Health Survey

CONSENT AGREEMENT

Student:

I do / do not consent to participate in this survey under the conditions stated.

_____

signature of student

_____

please print your name

I understand that I am free to withdraw my consent and terminate my participation at any time, without penalty. All original questionnaires will be destroyed after data has been compiled.

University
of
Alberta

Department of Educational Psychology

Adolescent Health Survey

To all students:

Many students are taking part in this important survey. This study will help us to understand some of your thoughts, values and attitudes in relation to you, your development as a person, your friends and family and your beliefs, attitudes and behaviours in relation to sex and other health related behaviours. This information will help us to develop programs throughout Alberta.

The information you give us is **completely confidential**. Please do not put your name on the questionnaire. There are no right or wrong answers, but please be open and honest with your responses to the questions on the survey. Your opinion is very important to us. Thank you for your help.

SECTION I - General Information

The first section of questions deals with some information about you, your family, and school.

1. How old are you? _____ years

2. What is your sex (gender)? ☐$_1$ male ☐$_2$ female

3. What is your Faculty? _____ Major? _____ Minor? _____

4a. What year are you in your program? _____

b. Do you have a previous degree? ☐$_1$ Yes ☐$_2$ No If yes, in what? _____

5. At this time (right now), with whom do you live? (Check **all** that apply.)

- ☐$_1$ By myself (no others)
- ☐$_2$ Partner/Spouse
- ☐$_3$ Mother
- ☐$_4$ Father
- ☐$_5$ Stepmother
- ☐$_6$ Stepfather
- ☐$_7$ Brother &/or Sister
- ☐$_8$ Room-mate(s)
- ☐$_9$ child(ren)
- ☐$_{10}$ Step-brother &/or Step-sister
- ☐$_{11}$ Aunt &/or Uncle
- ☐$_{12}$ Other(s) (please name: for example, grandparent, guardian) _____

6. What are (or were, if deceased) your parents' occupations?
Please check the primary occupation for both your father and mother.

Type of Occupation	Father	Mother
1. Professional (e.g. accountant, lawyer, teacher, nurse, doctor)	☐	☐
2. Business (e.g. owner, executive officer, manager)	☐	☐
3. Factory worker, labourer, truck driver, waitress, oil field worker	☐	☐
4. Clerical (e.g. sales clerk, secretary)	☐	☐
5. Sales (e.g. real estate, insurance)	☐	☐
6. Skilled worker (e.g. carpenter, electrician, plumber, policeman)	☐	☐
7. Farmer or rancher	☐	☐
8. Homemaker (e.g. housewife)	☐	☐
9. Arts (e.g. writer, performing artist, musician)	☐	☐
10. Unemployed	☐	☐
11. Other (Please specify)	☐	☐

7. What is your approximate overall GPA? _____

8. What was your approximate average in high school? _____

9. What extracurricular activities are you involved in <u>now</u> (Check **all** that apply) ?
   - ☐1 team sports (e.g. hockey, volleyball)
   - ☐2 individual athletics (e.g. running, yoga, snowboarding)
   - ☐3 politics, student government
   - ☐4 music
   - ☐5 volunteer work (explain) _____
   - ☐6 other(s) _____

10. What extracurricular activities were you involved in <u>junior high or high school</u> (Check **all** that apply)?
    - ☐1 team sports (e.g. hockey, volleyball)
    - ☐2 individual athletics (e.g. running, yoga, snowboarding)
    - ☐3 politics, student government
    - ☐4 music
    - ☐5 volunteer work (explain) _____
    - ☐6 other(s) _____

11. Think back to high school, what **were** your plans immediately after completing high school?
    - ☐1 continue my education at university
    - ☐2 continue my education at a college with the intention of transferring to a university
    - ☐3 continue my education at another post-secondary institution (NAIT, Grant McEwan)
    - ☐4 to get a job
    - ☐5 to travel
    - ☐6 I didn't know at that point
    - ☐7 other _____

12. Which of the following best reflects your beliefs:
    - ☐1 A man and woman should split the responsibility of caring for their children
    - ☐2 Men should help out as much as they can with care of the children but the main responsibility lies with the woman.
    - ☐3 A woman should stay at home and raise the children while the husband works to provide for the family

13. What is your ethnic background? _____
    (please be more specific than "Canadian")

14. For each of the statements listed below, please circle whether you strongly agree, agree, disagree or strongly disagree with the statement. The last column (N/A) means it is not applicable (not relevant) to you.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree	N/A
a) I am very happy with my friendships.	1	2	3	4	5	6	7
b) I have a good relationship with my mother.	1	2	3	4	5	6	7
c) I have a good relationship with my father.	1	2	3	4	5	6	7
d) Before I do something, I try to consider how my friends will react to it.	1	2	3	4	5	6	7
e) I consider religion/spirituality very important in my life.	1	2	3	4	5	6	7
f) I try to keep out of trouble no matter what.	1	2	3	4	5	6	7
g) I often act on the spur of the moment, without stopping to think.	1	2	3	4	5	6	7
h) Generally, I attend religious services weekly.	1	2	3	4	5	6	7
i) Before I do something, I try to consider how my parent(s) will react to it.	1	2	3	4	5	6	7
j) The person I date or "go out with" is one of my best friends.	1	2	3	4	5	6	7
k) I can talk with my mother about almost anything.	1	2	3	4	5	6	7
l) I can talk with my father about almost anything.	1	2	3	4	5	6	7
m) Family relationships are more trouble than they are worth.	1	2	3	4	5	6	7
n) My parent(s) are very strict (i.e. they tell you what to do, when you can go out, etc.)	1	2	3	4	5	6	7
o) Growing up, my parent(s) were very strict (i.e. they told you what to do, when you could go out, etc.)	1	2	3	4	5	6	7

SECTION II

Read each statement, and then rate how you feel about it using the following scale.

Do you agree or disagree with the following statements?	strongly disagree	kind of disagree	neither agree or disagree	kind of agree	strongly agree
1. I believe I can do anything I set my mind to.	1	2	3	4	5
2. Nothing seems to really bother me.	1	2	3	4	5
3. No one has the same thoughts and feelings that I have.	1	2	3	4	5
4. I think that I am more persuasive than my friends.	1	2	3	4	5
5. No one can stop me if I really want to do something.	1	2	3	4	5
6. I'm somehow different from everyone else.	1	2	3	4	5
7. It often seems like everything I do turns out great.	1	2	3	4	5
8. I don't think anything will stand in the way of my goals.	1	2	3	4	5
9. I'm the only one who can understand me.	1	2	3	4	5
10. I believe that other people control my life.	1	2	3	4	5
11. I don't believe in taking chances.	1	2	3	4	5
12. I believe that I am unique.	1	2	3	4	5
13. I think I can be anything I want to be.	1	2	3	4	5
14. I'm a fragile person	1	2	3	4	5
15. I think that deep down everybody is the same.	1	2	3	4	5
16. I believe that everything I do is important.	1	2	3	4	5
17. I believe in knowing how something will turn out before I try it.	1	2	3	4	5
18. I'm just like everybody else.	1	2	3	4	5
19. I think I'm a powerful person.	1	2	3	4	5
20. I believe in taking risks	1	2	3	4	5
21. Everybody goes through the same things that I am going through.	1	2	3	4	5
22. I think that I am better than my friends at just about anything.	1	2	3	4	5

Appendix C

Do you agree or disagree with the following statements?	strongly disagree	kind of disagree	neither agree or disagree	kind of agree	strongly agree
23. I tend to doubt myself a lot.	1	2	3	4	5
24. It's hard for me to tell if I am different from my friends.	1	2	3	4	5
25. I often feel that I am insignificant and that I don't really matter.	1	2	3	4	5
26. Other people have no influence on me.	1	2	3	4	5
27. There isn't anything special about me.	1	2	3	4	5
28. I often think that people don't listen to what I have to say.	1	2	3	4	5
29. There are times when I think that I am indestructible.	1	2	3	4	5
30. I honestly think I can do things that no one else can.	1	2	3	4	5
31. I can get away with things that other people can't.	1	2	3	4	5
32. Everyone knows that I am a leader.	1	2	3	4	5
33. Nobody will ever know what I am really like.	1	2	3	4	5
34. No one sees the world the way that I do.	1	2	3	4	5
35. It is impossible for people to hurt my feelings.	1	2	3	4	5
36. People always do what I tell them to do.	1	2	3	4	5
37. People usually wait to hear my opinion before making a decision	1	2	3	4	5
38. I usually let my friends decide what we are going to do.	1	2	3	4	5
39. My feelings are easily hurt.	1	2	3	4	5
40. The problems that some people get into could never happen to me.	1	2	3	4	5
41. I enjoy taking risks.	1	2	3	4	5
42. It is easy for me to take risks because I never get hurt or caught.	1	2	3	4	5
43. I don't take chances because I usually get in trouble.	1	2	3	4	5
44. I am always in control.	1	2	3	4	5
45. I am not afraid to do dangerous things.	1	2	3	4	5
46. Sometimes I think that no one really understands me.	1	2	3	4	5

The questions in this section are taken from Lapsley, D. K. (1988). NPFS Instrument.

SECTION III - Sexual Attitudes

In this section we would like to know your **opinions on some sexual issues and behaviours**. We are also interested in knowing about risk factors related to pregnancy and Sexually Transmitted Diseases (STDs) including AIDS.

Some people have had sex and others have not. It does not matter whether you are sexually active or not to answer this section

Remember, the information you give us is **completely confidential**. There are no right or wrong answers but please be open and honest with your responses.

Please circle your answer to each question below by choosing from the responses on the right.	**Strongly Disagree**	**Moderately Disagree**	**Slightly Disagree**	**Slightly Agree**	**Moderately Agree**	**Strongly Agree**
1. Having sex before marriage is okay if both people agree to it.	1	2	3	4	5	6
2. Having sex would be a good way to keep my partner.	1	2	3	4	5	6
3. My friends think I should not have sex while I am an unmarried (or when I was unmarried).	1	2	3	4	5	6
4. The possibility of me catching AIDS is something I've never really thought about	1	2	3	4	5	6
5. Having sex is a good way for people to impress their friends.	1	2	3	4	5	6
6. Having sex would make me feel sort of important.	1	2	3	4	5	6
7. It is okay to tell someone I love them to get them to have sex with me.	1	2	3	4	5	6
8. I think it is okay to say "no" when someone wants to touch me.	1	2	3	4	5	6
9. I would feel comfortable talking with my mother about sex.	1	2	3	4	5	6
10. I would feel comfortable talking with my father about sex.	1	2	3	4	5	6

Please circle your answer to each question below by choosing from the responses on the right.	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
11. It's a good idea to take precautions against AIDS but it can have a bad effect on people's sex lives	1	2	3	4	5	6
12. Having sex would be a way for me to show that I love someone.	1	2	3	4	5	6
13. The majority of my friends have had sex.	1	2	3	4	5	6
14. It is against my parent's values for me to have sex while I am unmarried (or when I was unmarried).	1	2	3	4	5	6
15. I would feel comfortable talking with my partner about sex.	1	2	3	4	5	6
16. Having sex before marriage is okay only if the couple is planning to marry.	1	2	3	4	5	6
17. None of my friends are the kind of people who would be AIDS carriers, it's just not an issue with me	1	2	3	4	5	6
18. If a girl gets pregnant, it is completely her fault.	1	2	3	4	5	6
19. My parent(s) think it is okay for me to have sex as long as I use protection.	1	2	3	4	5	6
20. Having sex before marriage is okay as long as the couple is close, even if they don't plan to marry.	1	2	3	4	5	6
21. People who want to have sex should respect the right of others to say "No".	1	2	3	4	5	6
22. I would feel comfortable talking with my partner about using condoms and/or birth control.	1	2	3	4	5	6
23. It is against my values for me to have sex while I am unmarried.	1	2	3	4	5	6
24. As a virgin, I just wanted to (or still want to) "get it over with"	1	2	3	4	5	6
25. It's hard to know what to think about AIDS-- even the experts don't agree	1	2	3	4	5	6

SECTION IVA - Peer-Expected Dating Behaviors

This part of the questionnaire asks you to think about the majority of the teens in your school, and to **predict what you think most of them would do**, or what you would expect most of them to do, while on dates.

To help you with this portion of the survey, a brief definition of the terms used has been given below:

- **date**: when two people meet alone or in a group at some place at some time
- **going steady**: going out with only one person, in a mutually exclusive relationship
- **kissing**: casual kissing, once or twice on a date
- **necking**: more prolonged kissing, with cuddling and stroking of the hair and face
- **light touching**: fondling of the body with the hands
- **heavy touching**: prolonged fondling, often with the removal of clothing, below the waist
- **sex**: intercourse, full sexual relations (go all the way)

1. Two people like each other, and are <u>on a first date</u>:
   If two people who liked each other were on a first date, would you expect them to. . .

	yes	no	not sure
(1) hold hands?	1	2	3
(2) kiss?	1	2	3
(3) neck?	1	2	3
(4) light touch?	1	2	3
(5) heavy touch?	1	2	3
(6) have sex?	1	2	3

2. Two people who have <u>gone out several times</u>:
   If two people have gone out several times as a couple, would you expect them to . . .

	yes	no	not sure
(1) hold hands?	1	2	3
(2) kiss?	1	2	3
(3) neck?	1	2	3
(4) light touch?	1	2	3
(5) heavy touch?	1	2	3
(6) have sex?	1	2	3

3. A couple that is going steady:
If a couple were going steady, would you expect them to . . .

	yes	no	not sure
(1) hold hands?	1	2	3
(2) kiss?	1	2	3
(3) neck?	1	2	3
(4) light touch?	1	2	3
(5) heavy touch?	1	2	3
(6) have sex?	1	2	3

4. A couple that is in a serious, committed relationship:
If a couple were seriously thinking about marriage, or were in a deep, committed relationship, would you expect them to . . .

	yes	no	not sure
(1) hold hands?	1	2	3
(2) kiss?	1	2	3
(3) neck?	1	2	3
(4) light touch?	1	2	3
(5) heavy touch?	1	2	3
(6) have sex?	1	2	3

SECTION IVB - Actual Dating Behaviors

Now, these questions are intended to gather information about **behaviours of young Canadians while on dates.** We are interested in **your** experiences. Please give us your honest answers..

I. While on a first date with someone:

1. Have you ever been on a date with a person? ☐1 yes ☐2 no (If no, circle 4 below)
2. If yes, on any of the first date(s) with someone, did you ever. . .

	yes	no	not sure	doesn't apply
(a) hold hands?	1	2	3	4
(b) kiss?	1	2	3	4
(c) neck?	1	2	3	4
(d) light touch?	1	2	3	4
(e) heavy touch?	1	2	3	4
(f) have sex?	1	2	3	4

II. After going out several times with one person:

1. Have you ever had several dates with the same person? ☐1 yes ☐2 no (If no, circle 4 below)
2. If yes, after several dates with the same person, did you ever. . .

	yes	no	not sure	doesn't apply
(a) hold hands?	1	2	3	4
(b) kiss?	1	2	3	4
(c) neck?	1	2	3	4
(d) light touch?	1	2	3	4
(e) heavy touch?	1	2	3	4
(f) have sex?	1	2	3	4

III. While going steady:

1. Have you ever gone steady with someone? ☐1 yes ☐2 no (If no, circle 4 below)
2. If yes, while going steady with someone, did you ever. . .

	yes	no	not sure	doesn't apply
(a) hold hands?	1	2	3	4
(b) kiss?	1	2	3	4
(c) neck?	1	2	3	4
(d) light touch?	1	2	3	4
(e) heavy touch?	1	2	3	4
(f) have sex?	1	2	3	4

IV. While in a serious, committed relationship:

1. Are you, or have you ever been in a serious love relationship where you have spoken about marriage? ☐1 yes ☐2 no (If no, circle 4 below)
2. If yes, when you were in a serious love relationship, did you ever. . .

	yes	no	not sure	doesn't apply
(a) hold hands?	1	2	3	4
(b) kiss?	1	2	3	4
(c) neck?	1	2	3	4
(d) light touch?	1	2	3	4
(e) heavy touch?	1	2	3	4
(f) have sex?	1	2	3	4

SECTION V - Sexual Behaviour

The following questions deal with **your** sexual behaviour. Remember, the information you give us is **completely confidential**. There are no right or wrong answers but please be open and honest with your responses.

1. Please check the most applicable:
   - ☐1 single
   - ☐2 married
   - ☐3 living common-law
   - ☐4 seperated
   - ☐5 divorced
   - ☐4 other _____

2. How old were you when you began to date? ☐1 I do not date ☐2 _____ (age in years)

3. Are you currently in a steady (monogomous) relationship? ☐1 Yes ☐2 No

4. If yes, how long have you been in this relationship?
   - ☐1 less than 3 months
   - ☐2 3 to 6 months
   - ☐3 6 months to a year
   - ☐4 1 to 2 years
   - ☐5 over 2 years

5. If single, do you currently date more than one person at the same time?
   ☐1 I do not date ☐2 Yes ☐3 No

6. Often people tell us that even though they have not had sexual intercourse, they still engage in sexual activities. Please indicate types of sexual activity that you have done willingly (not forced): (Check **all** that apply to you or check N/A if you have not done any of these activities)
   - ☐1 holding hands
   - ☐2 kissing (casual kissing, once or twice)
   - ☐3 necking (more prolonged kissing, with cuddling and stroking of the hair and face)
   - ☐4 light touching (fondling of the body with the hands)
   - ☐5 heavy touching (prolong fondling, often with the removal of clothing, below the waist)
   - ☐6 oral sex
   - ☐7 anal sex
   - ☐8 N/A

7. Have you ever had sex? ☐1 Yes ☐2 No

8. Were you drinking alcohol and/or using drugs the first time you had sex?
   ☐1 I have never had sex ☐2 Yes ☐3 No

9. Were you drinking alcohol and/or using drugs the last time you had sex?
   ☐1 I have never had sex ☐2 Yes ☐3 No

10. How old were **you** when you voluntarily had sex for the first time?
    If you have not had sex, please check the box next to that statement. If you have had sex, please check the age you were when you first had sex.
    ☐1 I have never had sex
    ☐2 Less than 12 years old
    ☐3 12 years old
    ☐4 13 years old
    ☐5 14 years old
    ☐6 15 years old
    ☐7 16 years old
    ☐8 17 years or older

11. How old was **your partner** when you voluntarily had sex for the first time?
    If you have not had sex, please check the box next to that statement. If you have had sex, please check how old your partner was the first time you had sex.
    ☐1 I have never had sex
    ☐2 Less than 12 years old
    ☐3 12 years old
    ☐4 13 years old
    ☐5 14 years old
    ☐6 15 years old
    ☐7 16 years old
    ☐8 17 years or older

12. The following adjectives have been used by young people to describe their first sexual experience. Please check off the one(s) that you feel best describe your emotions about your first encounter with sex. Check as many as you feel best describe your emotions at that time.

    ☐1 I have never had sex
    ☐2 guilty
    ☐3 afraid
    ☐4 raped
    ☐5 anxious
    ☐6 worried
    ☐7 betrayed
    ☐8 hurt
    ☐9 wonderful
    ☐10 stimulated
    ☐11 loved
    ☐12 mature, grown-up
    ☐13 fulfilled
    ☐14 excited
    ☐15 other _____

13. How many different partners have you had sex with?
    ☐1 I have never had sex
    ☐2 1 person
    ☐3 2 people
    ☐4 3-4 people
    ☐5 5 or more people

14. How frequently do you have sex? Please check the statement that is most true for you.
    ☐1 I have never had sex
    ☐2 I've only had sex once
    ☐3 less than once a month
    ☐4 about once a month
    ☐5 2 - 3 times a month
    ☐6 about once a week
    ☐7 more than once a week

15. If you were to rate your sexual activity since you have lost your virginity, would you say you are:
    - ☐1 I have never had sex
    - ☐2 more sexually active than when you were younger
    - ☐3 less sexually active than when you were younger
    - ☐4 about the same

16. Before the first time you had sex, did you discuss contraceptives with your partner?
    ☐1 I have never had sex ☐2 Yes ☐3 No

17. The first time you had sex, what method(s) did you and/or your partner use to prevent pregnancy or STDs? Please check **all** that apply.
    - ☐1 I have never had sex
    - ☐2 We used nothing
    - ☐3 Birth Control Pills
    - ☐4 Condom
    - ☐5 Withdrawal
    - ☐6 Not sure
    - ☐7 Other (Please Specify) _____

18. The last time you had sex, what method(s) did you and/or your partner use to prevent pregnancy or STDs? Please check **all** that apply.
    - ☐1 I have never had sex
    - ☐2 We used nothing
    - ☐3 Birth Control Pills
    - ☐4 Condom
    - ☐5 Withdrawal
    - ☐6 Not sure
    - ☐7 Other (Please Specify) _____

19. Have you ever had a sexually transmitted disease?
    ☐1 I have never had sex ☐2 Yes ☐3 No

20a. Have you ever been pregnant or, if you are male, has your partner been pregnant?
    ☐1 I have never had sex ☐2 Yes ☐3 No

20b. If Yes, are you currently parenting/raising that child? ☐1 Yes ☐2 No

21. Was there ever a time you were forced to have sex against your will?
    ☐1 I have never had sex ☐2 Yes ☐3 No

22a. Have you ever talked to at least one of your parent(s) about sex?
    ☐1 Yes, a great deal ☐2 Yes, a bit ☐3 No, not at all

22b. If Yes, when did this discussion take place?
    ☐1 Before I was sexually active ☐2 After I became sexually active

23. For the questions below please circle the number that reflects how often you have done or talked about the issues or activities. If you are not sexually active, please circle 5 for Not Applicable.

Please use the categories on the right for your responses.	Almost Never	Sometimes	Usually	Almost Always	N/A
a. When you are alone with a date or partner, how often can you tell him/her your feelings about what you want and do not want to do sexually?	1	2	3	4	5
b. If someone puts pressure on you to be involved sexually and you don't want to be involved, how often do you succeed in stopping it?	1	2	3	4	5
c. If you have sex with your partner, how often can you talk with him/her about birth control and condoms?	1	2	3	4	5
d. If you have sex with your partner and want to use a condom, how often do you insist on using one?	1	2	3	4	5
e. When you have to make a decision about having sex and/or using protection, how often do you make a decision on the spot without worrying about the consequences?	1	2	3	4	5
f. Thinking back over **all the times** you have had sex in the past 6 months, how often have you or your partner(s) used something to stop a pregnancy/STDs from happening?	1	2	3	4	5

24. Do you think it is realistic for educators, health professionals, and parents, to expect teenagers to practice abstinence (NOT have sex)? ☐$_1$ Yes ☐$_2$ No
Please explain why or why not.

SECTION VI

In this section, we would like to know your opinions about a number of things. Please read each item and decide to what degree it reflects your thoughts and feelings. **If a statement has more than one part, please indicate your reaction to the statement as a whole.**

Please circle your answer to each question below by choosing from the responses on the right.	**Strongly Disagree**	**Moderately Disagree**	**Slightly Disagree**	**Slightly Agree**	**Moderately Agree**	**Strongly Agree**
1. I haven't chosen the occupation I really want to get into, and I'm just working at what is available until something better comes along.	1	2	3	4	5	6
2. I don't give religion much thought and it doesn't bother me one way or the other.	1	2	3	4	5	6
3. My ideas about men's and women's roles have come right from my parents and family. I haven't seen any need to look further.	1	2	3	4	5	6
4. I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life.	1	2	3	4	5	6
5. I really don't know what kind of friend is best for me. I'm trying to figure out exactly what friendship means to me.	1	2	3	4	5	6
6. Sometimes I join in leisure activities, but I really don't see a need to look for a particular activity to do regularly.	1	2	3	4	5	6
7. I don't think about dating ("going out") much. I just kind of take it as it comes.	1	2	3	4	5	6
8. I've thought my political beliefs through and realize I can agree with some and not other aspects of what my parents believe.	1	2	3	4	5	6
9. I just can't decide what to do for an occupation. There are so many jobs that have possibilities for me.	1	2	3	4	5	6

Please circle your answer to each question below by choosing from the responses on the right.	**Strongly Disagree**	**Moderately Disagree**	**Slightly Disagree**	**Slightly Agree**	**Moderately Agree**	**Strongly Agree**
10. There's so many ways to divide responsibilities in marriage, I'm trying to decide what will work for me.	1	2	3	4	5	6
11. I'm looking for an acceptable perspective for my own views of life, but haven't really found it yet.	1	2	3	4	5	6
12. I've had many different friendships and now I have a clear idea of what I look for in a friend.	1	2	3	4	5	6
13. While I don't have one recreational activity I'm really committed to, I'm trying lots of leisure activities to identify one I can truly enjoy.	1	2	3	4	5	6
14. Based on past experiences, I've chosen the type of dating relationship I want now.	1	2	3	4	5	6
15. I haven't really considered politics. It just doesn't excite me much.	1	2	3	4	5	6
16. I might have thought about a lot of different jobs, but there's never really been any question since my parents said what they wanted.	1	2	3	4	5	6
17. A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe.	1	2	3	4	5	6
18. Opinions on men's and women's roles seem so varied that I don't think much about it.	1	2	3	4	5	6
19. After a lot of self-examination I have established a very definite view on what my own life style will be.	1	2	3	4	5	6
20. I only pick friends my parents would approve of.	1	2	3	4	5	6
21. After trying a lot of different leisure/recreational activities I've found one or more I really enjoy doing by myself or with friends.	1	2	3	4	5	6

Please circle your answer to each question below by choosing from the responses on the right.	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
22. My parents have always had their own political and moral beliefs about issues like abortion and I've always gone along accepting what they have.	1	2	3	4	5	6
23. I'm not sure what my spiritual beliefs are: I'd like to make up my mind but I'm not done looking yet.	1	2	3	4	5	6
24. My own views on a desirable life style were taught to me by my parents and I don't see any need to question what they taught me.	1	2	3	4	5	6
25. I don't have any close friends. I just like to hang around with the crowd.	1	2	3	4	5	6
26. My preferences about dating ("going out") are still in the process of developing. I haven't fully decided yet.	1	2	3	4	5	6
27. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.	1	2	3	4	5	6
28. It took me a long time to decide but now I know for sure what direction to move in for a career.	1	2	3	4	5	6
29. I've spent some time thinking about men's and women's roles in marriage and I've decided what will work best for me.	1	2	3	4	5	6
30. I've always liked doing the same leisure/recreational activities my parents do and haven't ever seriously considered anything else.	1	2	3	4	5	6
31. I date ("go with") only people my parents would approve of.	1	2	3	4	5	6
32. I've never really questioned my spiritual beliefs. If it's right for my parents it must be right for me.	1	2	3	4	5	6

The questions in this section are taken from the OMEIS Instrument. The test construction manual can be obtained from Dr. Gerald R. Adams, Department of Family Studies, University of Quelph, Quelph, Ontario, Canada N1G 2W1.

SECTION VII - Your Health-Related Behaviours

This last section of the questionnaire deals with information about health-related behaviours.

1. Are you currently pregnant or breastfeeding? ☐1 Yes ☐2 No ☐3 N/A - I'm male

2. During the past 6 months, how many cigarettes or packs of cigarettes have you smoked per day? (Check the box that indicates the average you have smoked per day.)

☐1 I have never smoked
☐2 I don't smoke, but I've tried it
☐3 I quit smoking
☐4 Less than one cigarette per day
☐5 One to five cigarettes per day
☐5 About one-half pack per day
☐7 About a pack per day
☐8 More than a pack a day

3. During the last 6 months, how often did you drink any alcoholic beverages, including beer, wine, or liquor? Check the box next to the statement that best describes how often you drink.

☐1 I have never drank alcohol
☐2 I don't drink alcohol, but I've tried it
☐3 I quit drinking
☐4 Less than once a month
☐5 About 1 or 2 days a month
☐6 About 3-6 days a month
☐7 About 2-4 days a week
☐8 Nearly every day
☐9 Every day

4. During the <u>past 6 month</u>, how often have you used street drugs? Check the box next to the statement that best describes how often you take street drugs.

☐1 I have never taken street drugs
☐2 I don't take street drugs, but I've tried them
☐3 I quit taking drugs
☐4 Less than once a month
☐5 About 1 or 2 days a month
☐6 About 3-6 days a month
☐7 About 2-4 days a week
☐8 Nearly every day
☐9 Every day

5. During the <u>past 6 month</u>, how often have you used steroids for the purpose of enhancing athletic ability? Check the box next to the statement that best describes how often you take steroids.

☐1 I have never taken steroids
☐2 I don't take steroids, but I've tried it
☐3 I quit taking steroids
☐4 Less than once a month
☐5 About 1 or 2 days a month
☐6 About 3-6 days a month
☐7 About 2-4 days a week
☐8 Nearly every day
☐9 Every day

6. Please feel free to make any comments about other issues of concern to you and your friends such as dating or sexual behaviors. Write them below.

Thank-you for taking the time to give us this information!